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VERY PRACTICAL OPTIMISM.

OUR congratulations to the directors of the Federated Malay States Rubber Co., Limited, for being able to present to their shareholders the most cheerful yearly business report which it has ever been the pleasure of THE INDIA RUBBER WORLD to review. How many times has one read in the financial papers, in the report of a general meeting of This-or-That Company, Limited, under the presidency of the chairman, the secretary having read the notice convening the meeting, that the chairman, rising to offer a few comments on the accounts, proceeded to explain the lack of more definite information on the ground that certain details had not arrived from America, or Africa, or Asia, and that the shareholders must take it for granted that affairs were in good shape, although the figures presented might be subject to a different construction. Mails had been delayed, or a manager was ill, or returns had not been received for a sale of merchandise, and though the usual dividend could not be declared this year, the prospects of the business were most enchanting.

Not so with the report of the rubber planting company referred to, which has its business domicile in Antwerp and its rubber trees in Selangor. "We have pleasure," the report opens, "in submitting . . . a profit and loss account largely exceeding our expectations." The figures recording the yield of rubber "exceed considerably our estimate." And so the report runs throughout—the most concrete expression of optimism possibly that ever emanated from a board of directors. And concrete optimism is away ahead of the abstract optimism that is expressed in predictions and promises, rather than distributing a dividend of 24 per cent. to shareholders who never before had received more than 8 per cent. on their shares.

Whatever the future of rubber may be, there is no question today that the holders of shares in productive rubber plantations, under good business management, are exceedingly lucky persons, and there are indications that they have not yet seen their best days. At the same time, it seems in order to point out that just as "all is not gold that glitters," every projected rubber plantation may not yield rubber in the days to come.

To recur to the subject of management, it is interesting to notice in the financial report of the particular rubber company under review that their expenses in Europe for the past business year amounted only to nine-tenths of 1 per cent. of the gross revenue of the company, though it must be mentioned that the directors received a percentage of the net profit, which does not seem to be a bad idea. If they have directed well, they deserve to share in the fruit of their labor.

"RESTRAINT OF TRADE."

A RECENT decision in a federal court in the United States unfavorable to the Standard Oil Co.—the first institution in the country to become known to the general public as a "trust"—cannot fail to revive in the popular mind the discussion as to the effect of trusts upon the general welfare. This is not a place for a review in detail of the decision referred to, if for no other reason than that is is not final; it remains to be reviewed by the United States supreme court. It will suffice here to mention that the unanimous opinion of the court of appeals in the eighth circuit, sitting at St. Louis, is that the Standard Oil Co., as a holding company for numerous petroleum refining companies, capitalized at $100,000,000, and with a recent market value for its shares of over $700,000,000, is a combination "in restraint of trade" in the meaning of the Sherman "anti-trust law" of 1890.

It remains to be seen whether the highest court in the land—and we believe that the United States supreme court is held universally not to be excelled in dignity and ability by any other body of men in existence—will confirm the decision of the learned court at St. Louis, one of the nine courts of appeals, in different districts, which pass upon important cases before they reach the final court at Washington, if they ever do. That is to say, the ultimate decision may

be that in the case under review there has been no violation of the federal law identified with the name of the late Senator Sherman. But more than this, the supreme court, when confronted by the basic question in concrete form, may hold the Sherman law itself to be incompatible with the constitution of the United States, which is the prerogative of the court. While John Sherman was among the ablest statesmen America has produced, the legislation of any era is but the crystallization of popular sentiment at the time, and liable (1) to be repealed by a reversal of the voice of the people, (2) to become a "dead letter" through neglect, or (3) to be invalidated by a decision of the supreme court.

THE INDIA RUBBER WORLD holds no brief for the Standard Oil Co.; it confesses to not having read the St. Louis decision, or the testimony and the briefs upon which the decision is based. All of this will come out later. But there can be no doubt that the act of which the late Senator Sherman was the author had for its object the prevention of such evils as were aimed at by the ancient English statute of monopolies. In this view, the existence of a monopoly is opposed to public policy, and as we look at it the question whether any existing combination in trade should be dissolved depends upon whether its operation constitutes a true monopoly.

The question of combination is another matter. The original thirteen English colonies in North America combined for the common good; does any publicist in the world hold today that the welfare of the United States would be enhanced by a dissolution of the Union into its component parts? Or that, instead of railway systems which permit a passenger to travel direct from the Atlantic to the Pacific without change of cars, it would be sounder policy for the traveler to be forced to buy one railway ticket—as originally—from New York to Harlem (now in the same municipality), another from Harlem to Albany, and so on across the continent? The new rubber régime, to which the whole industry is looking, involves the production of the raw material, not in hundred-pound lots by people without credit, here or there, but in hundred ton lots, or thousand ton lots, by forest exploitation companies on the Amazon, or by plantation companies in the Far East, based upon financial arrangements which will enable responsible producers to contract for supplying rubber for a year in advance at a fixed price. In no other way can the world's supply of rubber ever be produced at a minimum cost and the present disastrous unsettled condition of prices be done away with. Don't the banking systems of today furnish the business world with better accommodations than if loans had to be made from any Tom, Dick or Harry who happened to have a spare $1,000 or so to let his neighbors use? And the same rule holds good with manufactured wares of whatever kind, in large demand, and of a standard size or cost.

We repeat that we do not know what will be the result ultimately of the St. Louis decision in the oil case. But courts are man made and made up of men, and as the world moves the ideas upon which they are based are subject to change. And otherwise the world could make no progress. The world has abolished imprisonment for debt and the death penalty for stealing sheep. Two successful lawyers or two rag pickers are allowed today to form a partnership if they wish, and if popular opinion in the end shall prove favorable to co-operation in the manufacture or sale of commodities which are common necessities, even the courts must bow to that opinion.

"Monopoly" in the ancient sense has ceased to exist; and it is a rare thing for a sane business man to work for "restraint of trade." Who is there who doesn't want to see his business grow every year?

RESURRECTION OF MR. LEXOW.

IT is now several years since the Hon. Clarence Lexow, then a senator of the state of New York, on reading his morning newspaper one day, learned that there were trusts in the land, and became horror stricken. Whereupon he moved for the appointment of a legislative joint committee for investigating the evils of trusts and framing laws for combating them. Appointed chairman of such committee, he brought his fellow investigators to New York, and with power to compel the appearance of persons and papers, he forebore not for many days to delve into corporate wickedness; but are not all the evidence he uncovered, and his recommendations in regard thereto embodied in Senate Report No. 40, Session of 1897?

The text of Senator Lexow's investigation was that "combinations of capital in the form of trusts" are "creating monopolies, shutting out competition, displacing labor and driving the citizen of moderate means out of business, with the effect that production and price are not regulated by the natural laws of supply and demand."

There is no intention here to inflict upon the readers of THE INDIA RUBBER WORLD a review of Senate Report No. 40, of 1897. It is enough to say that corporate wickedness was uncovered at every step of the investigation. What became of it all, however, we fail to remember. But one paragraph in the Lexow report illustrates the temper of that voluminous document. It related to

> that contemporary and companion of the corporate monopoly—the department store. The passage of this recent commercial invention across the mercantile field is marked by the ruin of numerous previously prosperous tradesmen and the desolation of an army of employés. There is no need and no place for such an institution in the commercial economy of our State.

There is no record of the department store having gone out of existence, in New York or elsewhere, since the Lexow explosion. But even more space in Senate Report No. 40 was devoted to the American Sugar Refining Co., the wickedness of which was dilated upon with great vehemence by Mr. Lexow—and here is what gives point to his resurrection.

It happens that at this time the American Sugar Refining Co. also are receiving the attention of the federal courts. On November 22, before a United States circuit judge sitting in New York, former Senator Lexow appeared as counsel for the defendants and pleaded for a change of venue, urging as a reason the "inflamed state of public opinion" in regard to trusts. Can it be that Senate Report No. 40, after twelve years, still influences the people against trusts?

THE FACT THAT THE PNEUMATIC TIRE has been officially recognized as just having come "of age"—and before the advent of the pneumatic the now great automobile industry was non-existent—may very properly be regarded as encouraging to the latter day pioneers in aviation, a field in which rubber is hardly less important than in motoring.

JUST AS "THE RACE IS NOT ALWAYS TO THE SWIFTEST," the trade may come to realize that the best rubber may, for certain purposes, have to give way to inferior brands. Not that balata gum is an inferior material, when properly known, but for half a century it could not hope to compete with fine Pará.

"BRAZIL FOR THE BRAZILIANS" seems to be the motto of the people who have developed the rubber trade of the Amazon regions. Seeing how generally outsiders have failed to exploit rubber there successfully, it is hard to see how anybody can object to the motto.

IT MAY BE, AFTER ALL, that the frenzy of the Britishers to put capital into any sort of company that has rubber planting as its avowed object, is not less well based than the American susceptibility to invest in anything which may be advertised as a gold mine.

THE PROMINENCE OF HEELS in the British rubber trade suggested a brief article on our transatlantic brethren being "well heeled"—an expression we have heard somewhere—but the office dictionary fails to supply a satisfactory definition for this term, and the article will have to be postponed.

IT SEEMS THAT THE CONGO NATIVES are to be given the choice, ultimately, between paying their taxes in money or in rubber. Since they have complained so strenuously against having to go to the "bush" to collect rubber for this purpose, they probably have cash hidden in their stockings with which to meet the claims of the tax gatherer.

THE AMAZON RUBBER SYNDICATE.

TO THE EDITOR OF THE INDIA RUBBER WORLD: On September 28 there was held in Pará the first meeting, after their installation, of the associates of the Rubber Syndicate "A Productora Amazonica" [see THE INDIA RUBBER WORLD, September 1, 1909—page 422]. The firms represented were: Mello & Co., Freire Castro & Co., Rocha, Silva & Co., Costa & Menezes, Velhote, Silva & Co., Alves-Braga Rubber and Trading Co., Barboza & Tocantins, Cerqueira Lima & Co., B. F. da Silva, Silva, Bastos & Co., A. Motta & Co., and Silva, Ribeiro & Cie.

The president of the board of directors, Barao de Souza Lages, of the firm Mello & Co., presented a motion that the syndicate should immediately go into operation, notwithstanding the fact that the government has not yet granted them the privilege of the 4 per cent. duty rebate on the export of rubber.

Mr. Simao da Costa, representing The Alves, Braga company, in a well elaborated speech, tried to encourage his associates by explaining that according to the federal and state laws everybody concerned in the rubber industry can belong to the organized syndicate—*i. e.*, not only the proprietors of rubber estates and the *aviadores*, but even the brokers, salesmen, or clerks of the firms which handle rubber. He gave a description of the great services which a syndicate organized in such a manner can render to its associates.

To formulate the rules of the syndicate, Messrs. Simao da Costa, José da Rocha Fernandes, and Barreiros Lima were elected.

This report corroborates the article of Gustav Heinsohn, published in THE INDIA RUBBER WORLD [July 1, 1909], stating that the Pará government had not passed the duty reduction law with the view of excluding the foreign exporters from the Amazon market, but only to encourage the producer to export rubber directly to the foreign buyer.

The fact that many of the associates of the syndicate are only wholesale provision merchants and consequently cannot comply with the established law of being direct producers of rubber, excludes the syndicate, even if all of them should be Brazilian firms, from the right of exporting the rubber at a lower rate than is exacted under the general rule. From this is evident that the Pará government is entirely reliable. If any organization should get the benefits of this duty reduction law, it will only be one of direct producers, and there will be no speculation.

S. CLARK.

A GERMAN VIEW OF OUR "OPTIMISM."

[FROM THE "GUMMI-ZEITUNG," BERLIN.]

IN an article on the business situation on the other side of the ocean, THE INDIA RUBBER WORLD, of New York, says, among other things:

> The country is prosperous again. The country has been prosperous for a long time. This country cannot be otherwise than prosperous, with so many millions of honest and intelligent people working constantly to improve their condition—materially and morally. Would it not be a great blow to civilization if such concentrated effort by so many millions did not yield favorable results? . . . Business conditions in America, measured by every recognized standard, show an improvement over what has prevailed for a year or more past. In other words, business is approaching the normal American condition—that of continued improvement, keeping pace with the constant growth of a population that has a buying capacity not equaled in any other country, in any age.

Would it not be well for us here in Germany to become imbued with some of the healthy optimism shown in this conception of the situation? We assuredly are not unwarranted in doing so, for all indications are scarcely less favorable for us, and conditions are at once immeasurably improved when belief in an upward trend becomes prevalent.

RUBBER IN THE NEWSPAPERS.

THE able Minneapolis (Michigan) *Journal* has discovered why some producers of rubber tires can sell for less money than others, the reason being that—

"The larger manufacturers were able to buy thousands of dollars of crude rubber when prices were lower. The smaller manufacturers, however, could not afford to buy enough rubber to stock their gum cellars, so they have been forced to make prices from 5 to 15 per cent. higher than more popular and older competitors."

Is rubber really scarce? The able Boston *American* says: "In the forepart of August Elmer L. Corthell, direct from Pará, said that there was an abundance of crude rubber in that district, but that the producers of it were in despair at the prices offered by foreign buyers. The people were told by agents from this country that the panic here had so restricted the use of automobiles that there was scarcely any demand for rubber tires."

How does the able Elizabeth (New Jersey) *Journal* happen to know this? "Rubber for overshoes is very scarce for various reasons. - - - For this reason a pair of rubbers will cost about the same this year, but their quality will not be as good."

Under the heading "Boat Mill to Shut Down" the Boston *Post* of November 5 reported, under a Millville date line: "The United States Rubber Co.'s boat mill here will be shut down next week for an indefinite period for the purpose of curtailing production." Didn't know before that the company named were making too many boats.

RUBBER CONTRACTED BY HEAT.—Rubber is strongly contracted by heating, and Professor S. P. Thompson suggests that it would be possible to construct a heat engine to be driven by the contraction of rubber instead of by the expansion of water or air.

THE RUBBER CLUB OF AMERICA.

THE development of the New England Rubber Club, after ten years of successful existence, into The Rubber Club of America, as determined upon at the last midsummer outing [see THE INDIA RUBBER WORLD, August 1, 1909—page 393], has now been accomplished, the last formality being the incorporation of the Club, under its new name, in the state of Massachusetts. It may be of interest to the general reader, as well as the members of the Club, to see a transcript of the official certificate of incorporation, which follows:

THE COMMONWEALTH OF MASSACHUSETTS.

BE IT KNOWN, That whereas *Henry C. Pearson, J. Frank Dunbar, George H. Mayo, Arthur W. Stedman, Costello C. Converse, Ira Foss Burnham, Frederic C. Hood, L. Dewart Apsley, Elston E. Wadbrook and Frank D. Balderston* have associated themselves with the intention of forming a corporation under the name of *The Rubber Club of America*, for the purpose of *social intercourse among gentlemen connected with the rubber industry and the furtherance of educational and scientific research in India Rubber production and manufacture*, and have complied with the provisions of the statutes of the Commonwealth in such case made and provided, as appears from the certificate of the

President, Treasurer, Secretary and Executive Committee

of said corporation, duly approved by the Commissioner of Corporations and recorded in this office:

NOW, THEREFORE, I WILLIAM M. OLIN, Secretary of The Commonwealth of Massachusetts, do hereby certify that said *Henry C. Pearson, J. Frank Dunbar, George H. Mayo, Arthur W. Stedman, Costello C. Converse, Ira Foss Burnham, Frederic C. Hood, L. Dewart Apsley, Elston E. Wadbrook and Frank D. Balderston*, their associates and successors, are legally organized and established as, and are hereby made, an existing corporation under the name of

The Rubber Club of America,

with the powers, rights and privileges, and subject to the limitations, duties and restrictions, which by law appertain thereto.

WITNESS my official signature hereunto subscribed, and the Great Seal of The Commonwealth of Massachusetts hereunto affixed, this *fourth* day of *November* in the year of our Lord one thousand, nine hundred and *nine*.

[SEAL]

WM. M. OLIN,
Secretary of the Commonwealth.

A NIGHT WITH THE AERONAUTS.

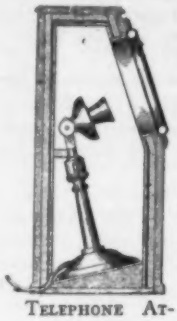
THE winter dinner of the Rubber Club of America, known for so many years as the New England Rubber Club, will be held in December, the date being the 13th, and the place of meeting the Algonquin Club, Boston. The executive committee have in prospect what will be one of the most interesting and unique entertainments that the club in its ten years' history has ever enjoyed. Appreciating the worldwide interest in Aëronautics, they have induced the secretary of the Aëro Club of America, Mr. Augustus Post, himself an aëronaut for many years, to show some moving pictures of aëroplanes in flight—notably one operated by Glenn H. Curtiss when he won the Hammondsport prize. These pictures are wonderfully graphic and give one a clearer idea of the graceful and thrilling flight of an aëroplane than any ever taken heretofore.

The speakers of the evening are Professor William H. Pickering, of Harvard University, president of the Aëro Club of New England; Professor A. Lawrence Rotch, professor of meteorology in Harvard University and director of Blue Hill Observatory; Professor Robert W. Wood, the brilliant and witty young physicist of Johns Hopkins University, Baltimore; and Edgar Beecher Bronson, aëronaut, explorer and *raconteur*. Mr. Bronson, by the way, has just returned from hunting big game over the very country which ex-President Roosevelt is still traversing. Other speakers of note have been invited. After the speaking those who are interested will have an opportunity to see a remarkable set of lantern slides showing different types of aëroplanes, dirigible balloons, and the like, which will be explained by Mr. Post.

BOSTON AND PROSPERITY.—In a review of the existing prosperous condition of the United States, the Boston *American* credits the use of Boston capital and the influence of the financial leaders of that city with an important share in the development of the country at large. The writer says, by way of illustration: "The United States Rubber Co., another example, is controlled and managed by Boston men, and all through the list of directors it will be found that Boston is playing a large part in commercial and financial affairs."

NEW TELEPHONE ATTACHMENT.

TO prevent the overhearing of telephone conversations, the transmitter of a desk telephone is enclosed in a box provided with a sound proof lining and with an aperture bordered by a rubber tube, against which the face of the speaker is pressed while talking. The receiver may be hung, as usual, on the switch arm on the transmitter standard, and may be removed for use through the talking aperture or through a door; or it may be hung on an arm connected to the switch arm through a U-shaped rod which encloses one of the sides of the sound proof box. The aperture at which this rod enters the box is closed by a flexible membrane, to which the rod is attached. The rubber tube which borders the speaking aperture is provided with a smaller tube for inflation purposes. The sound proof lining of the box may consist of two layers of felt separated by a layer of india-rubber. Invented and patented by E. F. Hutton, No. 35 New street, New York.



TELEPHONE ATTACHMENT.

A New York newspaper says: "Hanging on the wall behind the desk at the Holland House is a mahogany box about 2 feet long by 1 foot wide and deep, with an oval shaped hole in it lined with rubber. If you wait long enough you will see a clerk fit his face into the hole. This is one of those new telephone booths—one of the few that are to be seen about New York, and which it is said the telephone company is fighting. Talking into one gives you an ostrich-like feeling compared with the booth of the cupboard variety, but at the Holland House they say that the result is just as satisfactory as the other kind, and the 'ostrich' booth takes up no room."

MR. INGERSOLL RETIRES.

IN mentioning the appearance of the first automobile journal, THE INDIA RUBBER WORLD (December 10, 1895—page 87) said: "Should the motor carriages ever become popular it evidently will be a matter of interest to the rubber trade, since most of the specimen machines made up to date are provided with pneumatic tires, indicating that this is expected to be an important feature." The motor carriages have "become popular," and what an "important feature" the pneumatic tire has grown to be is the most striking fact in modern rubber history. All of which indicates that Ernest P. Ingersoll, when he founded *The Horseless Age*—that was before people talked about "automobiles"—he doubtless builded better than he knew. During the fourteen intervening years the paper mentioned has been conducted ably and successfully by Mr. Ingersoll, who during the month past disposed of it, with a view to devoting attention to his health. Before starting *The Horseless Age* Mr. Ingersoll had come into contact with the rubber trade as advertising manager for the Mechanical Rubber Co. (New York). It was at that time that he became familiar with the pneumatic tire and impressed with its

HAD $30,000,000 TO SPEND.

IN a sketch of Mr. Charles R. Flint, the Boston *Globe* says: "No single American is today better known in South America. His relations with Chili have existed since the beginning of his business career. He has held many positions of confidence under Chili, and has been its secret agent in many a deal involving the growth of its navy. Russia also has great confidence in Mr. Flint, and when, at the opening of the war with Japan, it wished to strengthen its navy, Mr. Flint was made its purchasing agent. and was handed $30,000,000 to spend in its behalf."

Mr. du Cros and the Dunlop Company.

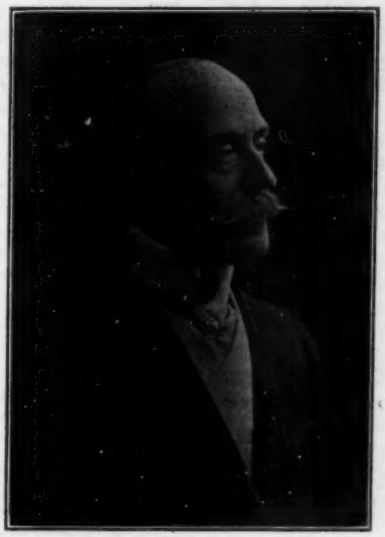
THE PNEUMATIC TIRE IS OF AGE.

AN event of more than passing interest to the tire and motor trades was the banquet tendered to Mr. Harvey du Cros at the Hotel Cecil, in London, on the evening of November 19, to celebrate the "majority" of the commercial application of the pneumatic tire. In other words, it is just 21 years since the issuance of the first of the patents which formed the basis of the great Dunlop tire company, with which Mr. du Cros has been identified in so important a degree.

It is true that a patent was granted to Thomson for a pneumatic tire as early as 1844, but his tire never met a practical application. John Boyd Dunlop, who obtained a patent in 1888, so far as is known, developed his invention without being aware of the work of Thomson, and though his tire was of a more practical character than Thomson's it was soon recognized that the earlier inventor had anticipated Dunlop's idea to an extent which rendered a patent on the latter of doubtful validity.

The company formed to manufacture the Dunlop tire were fortunate in securing other important patents which were brought out soon after the practicability of the pneumatic tire was assured, and these were the real foundation of the Dunlop Pneumatic Tyre Co., Limited, which attained so much success under the management of Mr. du Cros. Some very prominent cycle and motor traders participated in the celebration at the Cecil, where accommodations were arranged for 450 persons. The chair was taken by H. S. H. Prince Francis of Teck, chairman of the Royal Automobile Club. Mr. du Cros was presented with a solid silver gilt casket and a signed address of congratulation.

This banquet recalls to mind another at the Hotel Cecil. On the evening of September 16, 1904, a company numbering over 400 assembled on the invitation of the Dunlop company "in honor of the expiring of the Welch patent"—one of the most important owned by them. Mr. Harvey du Cros, the chairman of the company, presided at that dinner. At midnight the patent was silently consigned to the flames, and Mr. du Cros asserted that it was with great satisfaction, since the company were no longer to be annoyed by having to protect the patent.



HARVEY DU CROS, J.P., M.P.
[Managing Director of the Dunlop Pneumatic Tyre Co., Limited.]

MR. HARVEY DU CROS.

EVERYBODY knows the Dunlop tire and that, of course, suggests Harvey du Cros, or as our English friends write it, "Harvey du Cros, Squire of Howbery Park, Wallingford, and Member of Parliament from Hastings." What Mr. du Cros did in the tire business makes him of interest to the whole rubber trade—not that we want to know in detail all that the English journals have published about him, or rather about his forebears who were signeurs, nobles, and soldiers of the old regime of France. What is really interesting is something about the present Du Cros, and here it is:

He was born in Dublin in 1846 and is part French and part Irish. He was educated at the Kings Hospital, Dublin, and after a short preliminary commercial experience in the firm in which his father was a partner, entered into business relations with a Scotch firm of paper manufacturers and soon became the head of a large wholesale business in Ireland. He made money and made it fast, for at 43 he retired from business, and being an athlete spent his time training his six sons, all of whom are experts in boxing, fencing, and general outdoor sports. It was through their cycling interest that Mr. du Cros became interested in tires and in the rubber business.

The story of how he secured the Dunlop rights, how the small factory in Dublin grew to a business of great dimensions, and how he established in Coventry and Birmingham, and in France and Germany, great rubber works, are all a matter of history. Our interest, of course, centers in Mr. du Cros's rubber triumphs, but he has also helped build the automobile industry, and is a large stockholder in some very profitable motor companies. Besides he is interested in extensive mines in Spain which are worked by his own capital.

Personally, Mr. du Cros is below middle height, compactly built, rather quiet, but very alert. He has shown wonderful capacity for detail, and is an excellent judge of character, which perhaps was why he dodged the writer of this sketch and turned him over to a polite and courteous secretary.

THE GREAT DUNLOP COMPANIES.

THE history of the Dunlop Pneumatic Tyre Co., Limited, is written too fully in the pages of THE INDIA RUBBER WORLD to make it necessary to recall the details at this time. It is worth mentioning, however, that at the last annual meeting of the company, on December 17, 1908, Mr. du Cros stated that the company had paid in dividends, since the organization under the present name, £1,595,720 [=$7,765,571], besides which he might have dwelt upon the important business which has been based upon the earnings from the original capital not distributed as dividends. In other words, the Dunlop Pneumatic Tyre Co., founded with the sole purpose of profiting from the ownership of tire patents, came in time to consider what should be their course after the expiry of the patents, when it was decided to build up a manufacturing business which should be enduring, and this has been accomplished. Their tire patents no longer exist, but their eminence in the tire trade is still a great asset, besides which the company figure in the manufacture and sale of miscellaneous rubber goods to a very large extent.

The corporation already named is only one of several embraced in the Dunlop system. Their manufacturing business is carried on at Birmingham, under the name of the Dunlop Rubber Co., Limited, which is a separate corporation, with net assets stated recently at £832,000 [=$4,048,928]. The average annual profits of the Dunlop Rubber Co. for three years have amounted to £257,758 [=$1,254,379]. In addition to the businesses here named, the Dunlop interests embrace a tire factory in France, one in Germany, one in Canada, and one in Australia, and they profit from the manufacture and sale of the Dunlop tire in the United States, not to mention the sale of the Dunlop tire elsewhere, in countries where it is not manufactured. Recently they have been planning to establish a factory in Japan.

It is to be kept in mind that none of these enterprises to-day is based upon the holding of any patents; they are only results of the momentum gained by the Dunlop business machine when it really was based upon a patent very essential to it, the validity

of which was confirmed by the British house of lords.

Characteristic of Mr. du Cros was a passage in his address at the last meeting of shareholders of the Tyre company (that is the way they spell it in England): "Another valuable asset this company has is the board of directors, where there has never been a note of dissent—a board of directors who pursue a settled policy; it is continuous and that continuity is one of the best assets that this company possesses." Mr. du Cros could hardly have been expected to say so himself, but another might very well have suggested that he is practically the author of the company's policy, and the power which carries that policy into execution. He did mention in his address, by the way, his ownership of one-fifth of the share capital of the Tyre company, but he doubtless controls directly a much larger proportion.

DUNLOP INTERESTS IN FRANCE.

THE separate company which since 1896 has controlled the Dunlop tire interest in France—the Société Française des Pneumatiques Dunlop—is to be liquidated, its business and undertaking to be acquired by the Dunlop Rubber Co., Limited. The latter company will issue "income stock" to the shareholders of the French company at the rate of £2 for each £1 share now held, whether preference or ordinary, a minimum income of 5 per cent. being guaranteed. The trading profits of the French company for the year ending July 31, 1909, including interest on investments, amounted to £56,019 [=$272,616.46], which permitted of dividends of 6 per cent. on the preference and 30 per cent. on the ordinary shares.

The sale of the French company to the English company was sanctioned at a special meeting of the shareholders of the former in London on November 7. The solidarity of the Dunlop interests is indicated by the fact that the managing director of the French company is Arthur du Cros, J.P., M.P., son of Mr. Harvey du Cros. The capital of the French company is £159,807 [=$777,722.77].

The object of the change is to bring about certain economies through consolidation; also to open the way for the introduction into France of other Dunlop rubber products than tires. Under the terms existing hitherto the Société Française des Pneumatiques Dunlop, Limited, had the sole right to trade in France under the name "Dunlop," but by acquiring the good will of the French company the parent company, in England, may trade in France as freely as at home, especially since, by taking over a factory in France, they will not be liable to customs charges on whatever mechanical goods they may market in that country.

THE DUNLOPS AND THE DINNER.

THE veteran cyclist, R. J. McCredy, who helped so much in popularizing the pneumatic tire, and who is now editor of *The Motor News*, of Dublin, wrote in his issue for November 13:

"Everyone will be delighted to know that Mr. J. B. Dunlop and his son (J. B. D., junior) will be amongst the diners at the Pneumatic Tyre majority celebration banquet on the 19th inst. Nothing could possibly be more appropriate than the presence of the inventor of the tire and its first user, upon this historic occasion. It was feared that Mr. Dunlop would not be able to travel, because he is a delicate man, and a journey to London in the depth of winter is a rather formidable undertaking for a gentleman of his age and delicate health. However, he has decided to travel over specially for the functions, and we think that his presence upon the occasion will form the coping stone to the work of the committee. Every one of the directors of the original company will, therefore, be present to do honor to the occasion, and incidentally to Mr. Harvey du Cros, the present chairman of the company."

DUNLOP BRIEFS.

THE Dunlop Rubber Co. (Far East), Limited, have opened a branch in Singapore, at 7, Collyer quay, for the sale of tires of every class, and other rubber goods. The manager is Mr. Thomas Sibray, for many years with the Dunlop company in England. The company are reported to have an extensive trade in the Malay peninsula.

In these days of registration of trade marks generally, it is rather odd that the Dunlop tire trade mark was not registered in the United States until October of the present year.

The promotion of the present Dunlop Pneumatic Tyre Co., Limited, made Ernest Teralh Hooley famous, his profit from the transaction having been commonly reported at $10,000,000, for only two or three days' work. The most recent newspaper mention of Mr. Hooley was in connection with the reported purchase by Mrs. Hooley of an estate in Northamptonshire for nearly £100,000.

In connection with the invention of the pneumatic tire, one of our British exchanges mentions that Mr. H. Thomson Lyon, chairman of the highways committee of the Westminster city council, which forms part of the municipal government of London to-day, is a son of Robert William Thomson, who patented the first pneumatic tire in 1844, though his invention at that time was termed an "aërial wheel."

THE UNITED STATES PATENT OFFICE.

THE number of letters patent granted by the United States patent office during the year ended June 30, 1909, was larger than in any preceding year, the number being 34,332. The number of patents expiring during the year was 22,779, leaving a net increase in the number of effective patents of 11,553. The total number of patents issued, from the establishment of the office to June 30 last, was 926,719. The office has always been self supporting, and the total of receipts over expenditures from 1836 until now is $7,060,547. The commissioner of patents is desirous of having the government devote part of this surplus to the erection of a new building better fitted for its purposes than the present patent office. The commissioner reports continued improvement in the condition of affairs in the office, permitting a better service to be rendered to applicants for patents. Commissioner Moore has been designated to represent the United States at a meeting in Switzerland next year of the International Union for the Protection of Industrial Property, to discuss agreements in respect to the reciprocal protection of patents in different countries. It is a singular fact that in 6,763 cases where patents were ready for issue the same were withheld on account of the non payment of final fees, although six months are allowed for making such payments after the inventor is informed that his application has been allowed.

A MILLION DOLLARS FOR WRIGHTS.

UNDER title of the Wright Co., the aëroplane business of Wilbur and Orville Wright has been incorporated under the laws of New York, the papers having been filed on November 22. The capital, $1,000,000, has been paid in. The directorate, it is announced, is to include Cornelius Vanderbilt, Howard Gould, August Belmont, Allan A. Ryan, Theodore P. Shonts, Morton F. Plant, Edward J. Berwind, Andrew Freedman, Robert J. Collier—all New York men of affairs—and Russell J. Alger, of Detroit. One of the Wright brothers, it is stated, will be president, and the other vice-president. The Wrights will give their personal attention hereafter to the aëroplane factory already erected by them at Dayton, Ohio. The company have opened offices in New York and are prepared to accept orders for machines. An important object of the new company is the protection of the Wright patents in the United States and Canada, for which work some noted attorneys have been retained. A dinner in honor of the Messrs. Wright, in New York, on the evening of November 23, was largely attended by enthusiasts in aviation from all over the country.

Other details regarding the development of aëronautics will be found elsewhere in these pages.

The India-Rubber Trade in Great Britain.

By Our Regular Correspondent.

IF all rubber goods consisted solely of rubber instead of in so many cases containing only a modicum of it, there is no doubt that a considerable depression would have to be reported. As it is, the factories continue pretty busy, in spite of the addition to the price lists. That the situation is a perplexing and difficult one goes without saying, but it cannot be called acute, or even serious. Of course, in this manufacture as in others, the putting of a 10 per cent. or other rise on the price list does not mean that the manufacturer suffers no loss from the abnormal market conditions, because the rise which is put on never takes effect until its cause has had time to operate to the producers' disadvantage. In other words, prices cannot be put up the same day that the raw material is bought at an enhanced price. Perhaps the feature of the greatest novelty in the situation is the fact of rubber being sold six or eight months ahead. A manufacturer of 36 years experience tells me that in the whole of his connection with the trade he has never seen anything like the recent Liverpool transactions for delivery six or eight months ahead. The customary procedure of the past has rarely exceeded two months. The general trade of the country is undoubtedly improving, with the exception of the cotton industry, and the navy extensions recently decided on will mean augmentation of the usual admiralty contracts.

THE STATE OF TRADE.

A COMPANY referred to in the local papers as the Rubber Regenerating Co. of America is at the present time erecting a large factory in Trafford Park, Manchester, where the reclaiming of rubber by the alkali process is to be carried on on the large scale. I have not been able to come in contact with any official in a position to give me any details, but the company is said to be established at Chicago or thereabouts under the management of Mr. R. B. Price. In this connection I may mention that on September 13 a private company called the Rubber Regenerating Co., Limited, was registered in London. The capital is £1,000 in £1 shares, the business being that of planters and manufacturers of and dealers in rubber, balata, and other gums. The first directors are R. B. Price, H. Kidson and L. D. Kidson. The Trafford Park business, then, may be more than a European branch of the American factory. It is more than probable that the paragraphs in the local papers referring to the effect of the regenerating process being to make old rubber quite equal to new are not verbatim reports emanating from the officials. But allowing for newspaper inexactitude, this second invasion of American reclaimers into Lancashire is not without interest and importance. The former instance is, of course, the Northwestern Rubber Co., Limited, at Litherland, Liverpool. With regard to the site of the works, I may say that Trafford Park was, from the days of King Canute until recent years, the ancestral home of the De Trafford family. Now, however, it is the property of the Trafford Park Estates Co., Limited, and is being opened up for manufacturing purposes. The area is about 1,700 acres, and the position, just in the outskirts of Manchester on the banks of the ship canal, to say nothing of railway facilities, offers exceptional advantages. Among the works already established there are the Westinghouse Manufacturing Co. and W. T. Glover & Co., Limited, the cable makers.

RUBBER REGENERATING CO., LIMITED.

THE fact that one of the recently bought out companies has arranged to return its capital to the shareholders because the statements in the prospectus have been found to be erroneous is indicative of the rush there is at present to get properties on the market while rubber remains at its high prices. It takes time to get a report from an independent expert, so presumably in some cases promoters have been satisfied with information probably not altogether unbiased. With regard to the relative merits of the new Ceylon and Malayan companies, it has been said that the latter are the best investment, because the trees come to the producing stage sooner than is the case in Ceylon. I am inclined to think that this is not quite correct as a general statement. Certainly it is borne out by past experience, but this may be attributed largely to the fact that the earlier Ceylon plantations were on ground previously exhausted of its nutritious properties by crops such as coffee, while the Malayan rubber was planted in virgin soil. Now that the use of artificial manure is becoming more common in Ceylon this disparity may be expected to disappear, and further, the new plantations are to a great extent on soil which has not been exhausted by previous cultivation of crops. So far one hears of no great shortage of labor in the plantation regions, while this remains the crux of the situation in South America. In this respect, indeed, matters are tending to become worse, because occupation of a more desirable kind is increasing—for instance, harbor developments.

RUBBER PLANTING.

With regard to speculation in rubber shares, this is rapidly increasing. Probably the shares are used more as gambling counters than as legitimate investments, to judge by the continuous queries one hears as to whether it is time to get out. The persistence of the high price of rubber is proving a source of embarrassment to speculators, who, naturally, don't wish to sell until top prices have been reached.

WIDESPREAD notice has been attracted to this solvent by the newspaper reports of the proceedings connected with the death of Miss Horn-Elphinstone-Dalrymple while having a dry shampoo at Harrod's stores in London. After a protracted hearing, the charge of manslaughter instituted by the Crown against the shop assistants was abandoned before its final stage, but it was announced that any similar case in the future will be very serious for the operators. It is not surprising to hear that the liquid is not to be used again at Harrod's stores for this purpose. A noteworthy point about the prosecution was that the medical experts had just read up the subject, and knew practically nothing about the large trade application of tetrachloride. Still, as the medical evidence went to show that it had long been known as a strong and rather dangerous anaesthetic, it is as well that the rubber, oil-extracting and dry cleaning trades, where it is now extensively used, should take every precaution against accidents. In all probability, if Harrod's had employed assistants thoroughly familiar with its properties the fatal result would not have ensued, though even a trained anaesthetist does not necessarily know anything about the purity of his chemicals. It was mentioned in these notes a few months back that commercial tetrachloride generally contained a certain amount of carbon bisulphide as an impurity, and this was found to be the case in the material used for the shampoo, thus increasing its toxic effects. It may be taken for granted that we have not heard the end of the case, and in all probability the employment of tetrachloride in any way will shortly be hedged round with government restrictions. In another more recent fatality where two persons lost their lives, an explosion of petrol took place when a dry shampoo was in progress. The hair dresser said at the inquest that he held no license for petrol, which was in increasing use by ladies. It rather looks as if the whole business of dry shampooing, if the demand does not die out after these results, will have to be forbidden in stores and shops and carried on solely in premises

CARBON TETRACHLORIDE.

subjected to inspection and by certificated operators. Anyhow, the home secretary in answer to questions put in Parliament, has said that the operators will be indicted for manslaughter in the event of any further fatalities with carbon tetrachloride. It therefore behooves rubber manufacturers to take all possible precautions in this connection.

WHITING IN MEXICO.

WITH reference to this topic, mentioned in the October number of THE INDIA RUBBER WORLD, I don't know that it is quite accurate to use the term "whiting" for a natural product. It is usual to limit the term whiting to the product which is obtained from chalk by elutriation in water, whereby the gritty particles, sand, and the like, are removed by subsidence. Of course, the new Mexican discovery may be of a purity hitherto unknown, but as a refining plant is being put up it does not look as if it was so very superior to the ordinary chalk of England and France. To the best of my knowledge the English whiting is not obtained, as stated in the article, from a very hard limestone, but from the soft chalk which belongs to quite a different geological horizon. I do not know personally of any refining works on the chalk dips of Albion, but across the water in the same chalk strata Taylor & Son, an English firm, are proprietors of the Carrierer du Mont de Caux, near Dieppe, where there is a large purification plant. The price paid by rubber works for their whiting is much less than it was in days I can recall, and the margin of profit cannot be large. Of course, entire absence of grit is a most important desideratum, the color also being a gage of quality.

MR. BAXTER'S RETIREMENT.

MR. JAMES E. BAXTER has retired from the board of the Leyland and Birmingham Rubber Co., Limited, and Mr. R. T. Byrne has been elected chairman in his place. It will be remembered that Mr. Baxter, to whose initiative and energy is due the great development of the Leyland factory from a comparatively insignificant concern, retired some years ago from the active control, but resumed his position at a later date by the express desire of the shareholders. Lest there should be any misapprehension on the point, I may state that Mr. Baxter's withdrawal from the board is due to the multiplicity of his interests and engagements. These include directorships in two or three rubber planting companies, on the boards of which he can, of course, speak with a knowledge of the trade in all its bearings.

PERSONAL MENTION.

THE death of Mr. Herbert Wilford Brett, reported in the last INDIA RUBBER WORLD, was a shock to his many friends, though he had been by no means in robust health of late. The end came very suddenly, when he was playing billiards with Mr. H. de Courcy Hamilton, at his own house at Newbury, Berkshire. Mr. Brett, who was a clergyman's son, is said to have amassed a fortune in connection with rubber planting companies, being on the boards of a large number.

Mr. Hamilton, a relative of General Sir Bruce Hamilton, has had a long experience as a planter, notably in the West India islands. He is now a director of three or four rubber planting companies, and has just left England for Ceylon and Sumatra in connection with their interests.

Lord Kingsale, who appeared as chairman on the prospectus of the Ivory Coast Rubber Estates, Limited, is the premier baron in the Irish peerage, the creation dating from 1187, though some authorities put the date of the actual patent some forty years later. He has the hereditary privilege of keeping his hat on in the presence of royalty. Certain statements in the prospectus and the previous newspaper paragraphs have been somewhat severely criticized by competent authorities, but those who know anything about company flotations will attribute these statements to the actual promoters rather than to the directorate.

Mr. Harvey Du Cros is to be entertained at dinner and have a presentation made to him on November 19, at the Hotel Cecil, London, to commemorate the twenty-first anniversary of the introduction of the pneumatic tire. This date is the first day of the Stanley Cycle Show.

AMERICANS IN SCOTCH RUBBER MILLS.

IN the official *Daily Consular and Trade Reports*, published at Washington, in the issue of November 15, appears the following report by the United States consul at Edinburgh—Mr. Rufus Fleming—in regard to the introduction of American men and ideas into Scotch factories:

"One of the important industries in this district is the manufacture of india-rubber goods. The estimated value of the products of this industry (chiefly overshoes and waterproof coats) in the calendar year 1907 was $5,800,000. The principal market for these goods is the United Kingdom, but for many years the manufacturers have made large sales abroad, principally in Russia, China, Germany and France.

"The leading article exported has been footwear. American and other foreign competition in the British market and abroad, especially in light-weight rubbers, has had a serious effect upon the Scotch industry, as indicated by the fact that the exports of rubber manufactures at Leith, the port town of Edinburgh, fell from $1,095,390 in 1907 to $464,731 in 1908. For the most part this drop in the export trade was due, I am informed, to a decline in the demand from the Far East. Although the home trade did not suffer nearly so severe a reduction, there was a marked decline, owing to the general financial depression last year as well as to outside competition.

"One of the results of this unsatisfactory condition is observed in the efforts of manufacturers to reorganize the industry on American lines. To this end they are employing American experts to take charge of the principal departments of manufacture. A prominent rubber company in this city recently engaged three men of long experience in New England mills, at salaries much higher than the British standard. This enterprise of Scotch manufacturers makes it clear that they recognize the necessity of organizing their establishments on the American plan, if not of copying the American styles of goods."

The following note from THE INDIA RUBBER WORLD of October 1 may be reread with interest in connection with the report above:

MR. ALEXANDER JOHNSTON, general works superintendent of the North British Rubber Co., Limited, of Edinburgh, was a visitor to the United States during the past month.

THE RUBBER INTEREST IN JAPAN.

RECENTLY issued official trade statistics of Japan show the value of imports of crude india-rubber and gutta-percha to have been as follows, the figures indicating yen [1 yen = 50 cents, gold]:

	1907.	1908.
From Dutch East Indies	133,486	335,545
From Straits Settlements	315,265	205,161
From Great Britain	97,684	184,293
From United States	145,841	101,291
From British India	53,106	35,720
From Germany	11,357	8,022
From other countries	13,975	16,546
Total	770,714	886,758

The imports of two lines of manufactures involving more or less rubber were as follows, values being stated in yen:

	1907.	1908.
Submarine and underground wires	1,333,144	420,277
Insulated electric wires	1,129,568	1,446,852

Under these heads the largest share came from Great Britain, with the United States second and Germany third.

The establishment of a rubber reclaiming plant is being considered by an important firm in Japan.

Some Rubber Interests in Europe.

REPORT OF THE HARBURG-VIENNA COMPANY.

THE directors of Vereinigte Gummiwaaren-Fabriken Harburg-Wien (vormals Menier—J. N. Reithoffer), Aktiengesellschaft, reporting for the thirty-seventh business year of the company, ended June 30, 1909, call attention to the unfavorable trading conditions of the preceding year, which to a certain extent have continued. Particularly, the weather was not such as to favor the sale of rubber footwear. On the whole, the sales from their three manufacturing plants were 15 per cent. less in money value than during the previous year. The profits, however, were larger, due to the fact that most of the manufacturing difficulties encountered since the disastrous fire [see THE INDIA RUBBER WORLD, December 1, 1905—page 55] had been fully recovered from before the beginning of the year under review. They were, moreover, able to make goods for part of the year from raw materials which had been purchased at comparatively low prices. The Austrian *Kartell* (trade agreement) operated satisfactorily, although prices in the dual monarchy still suffered through foreign competition. The report contains some interesting particulars regarding the "participation" of the Harburg-Vienna company in other corporations:

I. Internationale Galclith-Gesellschaft Hoff & Co., Harburg and Paris.—This company started in the beginning of the business year manufacturing operations in all the departments of the new Harburg works, located near the wharves. The generally prevailing unfavorable business conditions likewise affected the company's business to some extent, and the total sales consequently have not reached last year's figures. However, the business produced satisfactory results, because the improved technical arrangements exerted a favorable influence on the profits. Although ample contributions were made to the sinking fund, the dividend declared for the current book year again amounted to 10 per cent. Business showed increased activity during the present year, and the outlook for the company's business may consequently be considered favorable.

II. The Compania Explotadora de Caucho Mexicano, of Mexico, was this year again unable to declare a dividend, the output of guayule rubber having been smaller than last year, in consequence of the necessity of stopping the manufacturing plant on various occasions. The adoption of a new chemical process failed to produce the expected results, and the old process has consequently been used exclusively. In view of these circumstances, we consider it necessary to contribute a considerable amount to the sinking fund of the Participation Account, and propose that 200,000 marks [= $47,642] of the profits carried forward to new account be used for that purpose.

III. Kautschuk-gesellschaft Schon & Co., Harburg.—On account of our participation in this company, we have paid into the said concern, up to July 1 of the current year, the sum of 490,000 marks [= $116,722.90]. The works have been in operation for the past five months, and as they are making a product of good quality, we consider the outlook of this company to be favorable.

IV. Harburg and Vienna India Rubber Co. (of Great Britain), Limited.—This company, into which our former London agency has been converted, has likewise suffered from the generally prevailing unsatisfactory business conditions, as appears from the decrease in sales. The company's operations, nevertheless, produced satisfactory results.

It will be remembered that last year the company paid no dividend, but devoted the year's profits to strengthening their position in various ways made desirable by the result of the fire and the consequent interruption of trade. This year the net profit is 541,220.90 marks [=$128,816.57], and is dealt with as shown in the next column, including dividends aggregating 6 per cent. on the entire capital.

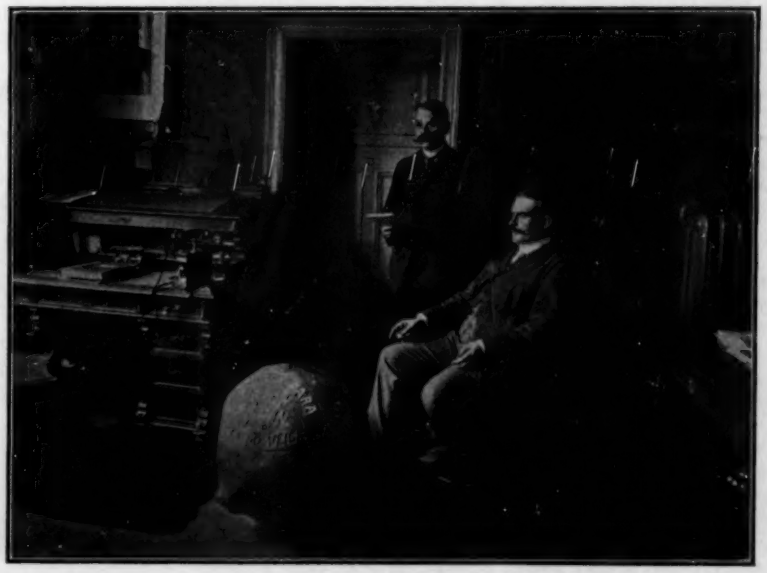
The company's assets on June 30 amounted to 20,769,301.87 marks [=$4,943,093.85.]

Net profit this year	*M*	541,220.90
Dividend 5 per cent. on the entire capital		300,000.00
	M	241,200.90
Less 10 per cent. commission to the directors		24,122.00
	M	217,098.90
Dividend 1 per cent. on the entire capital		60,000.00
Balance to 1909-10	*M*	157,098.90

The report concludes: "The business done by our works showed in a general way a slight improvement during the first few months of the current business year. Our orders for export, more especially, again showed an increase, and we may expect, therefore, that sales will not fall below last year's figures. We are meeting, however, with considerable difficulties due to the abnormally high prices of crude rubber. Fine Pará has advanced to 9 shillings per pound, and there has been a proportional advance in the medium grades. We consider it doubtful whether there will be within the comparatively near future any material decline from the present abnormally high rates, inasmuch as the world's consumption of rubber, which last year amounted to 62,376 tons, was 71,989 tons during the year covered by our present report, having consequently increased by about 9,600 tons, while the world's production was increased only from 66,379 tons to 70,587 tons, the increase being, therefore, about 4,200 tons. In accordance with these figures, the world's supply shows a material decrease. On June 30, 1909, the total supplies amounted, in fact, to only 5,024 tons, while they were 8,035 tons on June 30, 1908. To what extent we shall succeed in adapting our selling prices to the prevailing rates asked for the crude material will depend on the success of our efforts to establish, in conjunction with our more prominent competitors, adequately advanced selling prices for the staple goods having a large consumption. It would, however, at all events be impossible to establish advanced prices for a number of articles before January 1, 1910."

VIEW OF A GERMAN RUBBER WORKS OFFICE.

THE illustration on this page shows the interior of the private office of the managing director of Vereinigte Berlin-Frankfurter



"FINE UPRIVER PARA" AT A GERMAN RUBBER WORKS.

[Managing Director Spannagel, of the Vereinigte Berlin-Frankfurter Gummiwaren-Fabriken, at the right.]

Gummiwaren-Fabriken, at Gross-Licht erfelde, near Berlin. This gentleman is Mr. Emil Spannagel, of whom a sketch appeared in THE INDIA RUBBER WORLD March 1, 1906 (page 186.). On his right is the technical manager of the company, Herr Kroedel, and they are supposed to be "celebrating the record price of Pará at 9*s.* 2*d.*" The specimen of rubber shown, weighing over 150 kilograms, represented a value of over $750. This rubber is especially prepared for the Berlin-Frankfurter company in the upper Amazon region, for their use in the manufacture of certain of their specialties, including the famous "Veritas" billiard table cushions. The lettering on the ball of rubber includes the trade mark of the producer, and the initials of Mr. Spannagel's company.

The premises long occupied by the Berlin-Frankfurter company at 70-71 Mühlenstrasse, Berlin, and which they vacated for the purpose of finding more room in Gross-Lichterfelde, have been leased for a long term to Actiengesellschaft Metzeler & Co., of Munich, who intend to erect an asbestos weaving and spinning mill on the property, and to the Chemische Fabrik G. Meyer, Jr., of Einbeck.

THE HARD RUBBER INDUSTRY IN GREAT BRITAIN.

THE liquidation of the Scottish Vulcanite Co., Limited (Edinburgh, Scotland), under a resolution of the shareholders dated September 12, 1907, has now been practically completed. The various properties involved are to be taken over by a new company with the same name, of which the managing director will be Robert B. Black, long and extensively known in the British rubber industry. The history of the Scottish Vulcanite Co., Limited, which, by the way, was formed by Americans and at the beginning sustained close relations with the North British Rubber Co., Limited, was given in some detail in THE INDIA RUBBER WORLD December 1, 1907 (page 75). On the whole, the company had a profitable experience. The net profits for 34 years are stated to have averaged 13 per cent. on the share capital employed, which varied from £25,000 to £70,800. The new company are starting with £50,000 [=$243,325] capital, in ordinary shares of £1, of which 40,000 have been offered for subscription. Mr. Black, who has been mentioned, was connected for a number of years with The Clyde Rubber Works Co., Limited (Glasgow, Scotland), of which he was secretary as early as 1886. He left this connection in 1897 to found The Rubber Co. of Scotland, Limited (Stirling), of which he was managing director. Since the closing of the Scottish Vulvanite works there has not been in Great Britain any factory devoted exclusively to the hard rubber industry. Mr. Black is convinced, however, that the demand for hard rubber justifies the restarting of the works, and that the former customers show a disposition to revive their patronage. The ground, buildings, and machinery are valued at £63,328 and the whole property has been kept in good order. As in the past, the manufacture of celluloid will be carried on in connection with hard rubber goods.

GERMAN RUBBER MANUFACTURERS IN SESSION.

[FROM THE "GUMMI-ZEITUNG," NOVEMBER 5.]

A MEETING of the German rubber manufacturers was held today at the Hotel Kaiserhof, in Berlin, a large number being present. The principal purpose of the meeting was to consider the precarious condition of the crude rubber market, a fact well known in trade circles.

The exceptionally large advance in the price of crude rubber, compelling manufacturers to agree on a general advance in their prices, has in the meanwhile become even more pronounced. Further advances in the prices of some of the principal manufactured products are declared to be necessary, considering the state of the crude rubber market, and it is the consensus of opinion of the assembled manufacturers that further advances must be made in the prices of all rubber goods.

Dr. Voss, the commercial expert of the German consulate general in Rio de Janeiro, and Mr. D. Sandman, member of the Berlin Chamber of Commerce, gave a detailed exposition of crude rubber production and the condition of the rubber plantations. Close attention was paid to their remarks, and these gentlemen received a vote of thanks from the meeting.

THE GERMAN BALLOON FABRIC INDUSTRY.

THE Vereinigte Gummiwaren-Fabriken, Harburg-Wien, mentioned in THE INDIA RUBBER WORLD, September 1, 1909 (page 427) as prominent exhibitors of rubber baloon stuffs at the recent exhibition at Frankfort o/M., supply this paper with some further information in this connection. They have made balloons for several years at their factory in Wimpassing, Austria, besides which they have made at their factory at Harburg a/d Elbe the following balloons:

Alfa	1260 cu. meters	[=39,458 cu. feet].
Hansea	945 cu. meters	[=29,594 cu. feet].
Barmen	1680 cu. meters	[=52,611 cu. feet].
Sleipner	945 cu. meters	[=29,594 cu. feet].
Ilse	600 cu. meters	[=18,790 cu. feet].
Harburg	1260 cu. meters	[=39,458 cu. feet].

Besides, the Harburg-Vienna company mention having constructed the hull of a motor air ship lately completed at Elberfeld, and shortly to make a trial trip.

The Continental Caoutchouc- und Guttapercha-Compagnie, of Hanover, are supplying the balloon sheeting for the aëroplanes in course of construction at Pau, France, for the Wright brothers.

DEATH OF GUSTAV HEYSE.

ON October 1/14 Mr. Gustav Heyse, manager of the Russian-American India-Rubber Co. "Treugolnik," peacefully departed this life in St. Petersburg, after a brief illness. Mr. Heyse had been connected with the company since its organization, in 1860, and held the office of general manager of the works 47 years. The title of *Manufakturrat* was conferred upon him by the government in recognition of his beneficial efforts. As a member of the board of directors of various other large enterprises, Mr. Heyse was highly appreciated by all his associates as a business man of wide experience. In his intercourse with the factory hands under his charge, he always showed a kindly spirit, and they are indebted to his loving care for many humanitarian innovations. We have lost in him a man of rare kindness of heart and great ability, and his death is mourned as a serious loss by all who knew him.—*Gummi-Zeitung.*

RUBBER SAMPLE ROOM, WEISE & CO., ROTTERDAM.

[The establishment from the interior of which this view has been obtained was described in THE INDIA RUBBER WORLD, December 1, 1909—page 90.]

Balata and Its Applications.

GROWING USE OF BALATA BELTING.

BALATA belting, first used in Europe in sugar beet factories, has gained ground, until it is found in nearly every form of industrial establishments. Its use has also extended to the United States, where it is asserted that several millions of feet are in use, either for driving machinery or in conveying plants. The waterproof character of balata and its capacity for resisting acids give belts treated with this material a great advantage under conditions where leather or canvas would be impracticable. Advantages are also claimed for balata belting over rubber for various purposes. The impregnation of a cotton duck belt with balata involves the solutionizing of the balata, and in this form the gum is forced into the fabric, after which it is allowed to dry. The belts are not vulcanized. Balata belting is in use to-day in very many large factories throughout the United States, in a wide variety of industries—shoemaking, hat making, bleacheries, breweries, wood working, dye houses, slaughter houses, tanneries, and so on. For conveying purposes balata has found a wide use, in mines particularly. For the most part the balata belting used is imported. The European balata industry was reviewed in THE INDIA RUBBER WORLD, February 1, 1908 (page 150).

THE MERITS OF BALATA BELTING.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The occasional appearance in your pages of references to balata belting for machinery suggests to us that perhaps your readers would be interested in something further on the subject.

Being probably the largest importers of this type of belting into the United States, the firm now writing you naturally would like to see the widest possible sale of the class of goods referred to. Yet it must be admitted that all the makes of balata belting have certain limitations. For instance, if balata belting be run into a room where there is more or less steam present, it disintegrates the plies. Balata should not be used in temperature over 100 degs. to give the satisfaction and secure the length that this belting should give.

Doubtless users of every make of balata belting imported into the United States have had trouble at some time or other for the following reason: Many American manufacturers seem to think that a belt is a belt. They put it on any old machine, in any old place, and if it doesn't last as long as some other belt specially adapted for the machine, they say the belt is no good. Every belt, the same as every other article in industrial use, is best adapted for certain conditions, and when properly chosen will give better service than any other belt. In many places a balata belt, for example, cannot compete with leather or rawhide; in many other places a balata is far superior to leather or rawhide.

Such balata belting as is now made in Europe we find has a great tensile strength, and such belting, owing to the balata compound with which it is impregnated imparts a surface to the pulley which makes it one of the finest pulling belts in the world. We have made the claim many times that if a customer would take into consideration the increased efficiency caused by the balata belting giving an extra amount of pulling power from the main shaft to the machine, this element alone would be found almost to cover the cost of the belt.

Owing to the balata compound working constantly through the belting the latter clings to the pulley, so that it is the finest running belt that can be found. We have had a balata belt run at a very high rate of speed on 100 feet centers without the slightest waver. One advantage of the balata belt lies in the fact that while there is any belt left no dressing is required, as the balata compound keeps the belt soft and pliable until it is worn out. Most other kinds of belting require a large amount of dressing.

For such places as dye works, acid works, ammonia works, and the like, balata belting stands absolutely at the head of the list, for the reason that extreme cold or dampness does not affect it.

AN IMPORTER.

New York, November 12, 1909.

BALATA RESOURCES OF BRITISH GUIANA.

NOT only does British Guiana hold first rank in the production of balata gum today, but there are indications that the balata interest in this colony is on the eve of an important development. In answer to the question why British Guiana has not been better developed in respect of balata and india-rubber, it is pointed out that up to the end of 1907 *concessionaires* for collecting balata in the forests were only granted licenses practically from year to year, or at the utmost for three years. Naturally capital hesitated to embark in enterprises dependent upon a tenure of this description.

The laws since have been altered so as to grant rubber and balata licenses for 15 years, and as these licenses are renewable, with the approval of the government, which approval is not likely to be refused, this constitutes practically a freehold tenure. Already an increased output of balata has resulted. Whereas, formerly the exports did not exceed 500,000 pounds in a year average, they have been during the last three fiscal years 634,242 pounds, 973,269 pounds, and 1,090,405 pounds, respectively.

In view of the improved conditions of land tenure, mentioned already, and encouraged by the evident growing demand for balata in the industries, the extraction of this material is now being planned under a better system than formerly, through the consolidation of the producing interests, permitting the work to be carried on on a larger scale. A notable new enterprise in this connection is The Consolidated Rubber and Balata Estates, Limited, registered lately in London, with £250,000 [=$1,216,625] capital. The purpose has been to acquire the balata concessions held by a number of going concerns, some of them long established, including—

Garnet's Balata Co., Limited, who produced 218,112 pounds of balata in 1908; S. Davson & Co., Limited, 150,396 pounds; McKinnon & Co., 141,050 pounds; Downer & Co., 114,256 pounds; The New Essequibo Exploration Co., Limited, and The Balata and Rubber Corporation, Limited, formed recently to acquire the licenses held by six other companies. The latter corporation gathered during the year about 67,000 pounds of balata and over 6,000 pounds of rubber. In the aggregate the balata production of the combination to be effected by the new company was, for 1908, nearly 690,000 pounds, and their plans look to the production next year of more than 1,000,000 pounds.

Among the statements of interest in the prospectus of The Consolidated Rubber and Balata Estates, Limited, is that the balata tree grows in belts, instead of being scattered generally through the forest. Some of the belts are very small in extent, while others embrace tens of thousands of trees, which grow to an enormous size. The tree is best tapped only once in five years, but the yield is 40 or 50 pounds in one season.

It may be added here that the terms of the licenses granted include regulations in respect of the method of bleeding the trees. No tree may be tapped which does not measure 36 inches in girth at 4 feet from the ground. A fine of $48 is imposed for any violation of the tapping regulations.

Without doubt a great deal of native *Hevea* rubber exists in British Guiana, and the new company expect to develop an important rubber interest. There is a disposition to engage in planting rubber, which is encouraged by the new land laws.

Forward Sales of Plantation Rubber.

THE subject of the forward selling of rubber, as now engaged in by leading planting companies in Ceylon, has been widely discussed in the press of that colony. The practice and its possible results is one of widespread interest, as having a bearing upon the question whether ultimately rubber consumers may be able to depend upon covering their wants at a fixed price for months or even a year ahead—something which in the past never has been practicable. On this page appear some extracts from *The Times of Ceylon*, published at Colombo.

First is a letter addressed to the editor, which is self explanatory; it appeared in the issue of July 24 last:

FORWARD SELLING OF RUBBER—ANOTHER COMPLAINT.

SIR: I think it is high time that shareholders protested against directors making forward contracts for the sale of companies' rubber crops. What right have directors to speculate with shareholders' property? For it is just as much speculation to sell, because you think that prices *may* fall lower, as to buy because you think prices *may* go up. The proof that it is not legal, or considered the correct thing, is furnished by the fact that English companies don't do it; and I fancy that the directors of some of the Ceylon companies would find themselves in a very awkward position if recalcitrant shareholders took steps to enforce their directors making good the lors the companies sustain by such forward sales.

Buyers of rubber in large quantities would not be likely to enter into these forward contracts unless they were pretty sure that the prices were going to be higher, and I fancy American experts know more about these things than Ceylon directors. Yours, etc.,

A DISCONTENTED SHAREHOLDER.

Up-country, July 23.

* * *

THE next article appeared as the leading editorial in *The Times of Ceylon* of October 1, being suggested by a letter from New York which, while unsigned as it appeared in print, evidently is from the leading American firm buying Ceylon rubber on forward contracts. The article is given below in full, including the New York letter referred to.

* * *

FORWARD SALES OF RUBBER.

[FROM THE CEYLON PAPER'S EDITORIAL.]

WE have received from the American firm whose Ceylon agents, Messrs. C. W. Mackie & Co., put through the contracts for the sale of the 1910 crops of several Ceylon estates, an interesting communication in reply to a letter, condemning forward sales, which was published on July 24 in our columns. The grievance of our correspondent was against the Ceylon directors who made contracts forward, and he questioned whether they could not be compelled to make good to shareholders any losses which such forward selling might cause. He contended that the fact that London did not go in for forward contracts supported his opinion that it was not good business, whilst he thought that the purchaser of the crop forward was bound to be satisfied that he was making a very good bargain. The letter from the American buyer is as follows, name and address being omitted:

TO THE EDITOR, TIMES OF CEYLON—*Dear Sir:* Referring to the complaint of your correspondent who, writing July 23 last, used the nom-de-plume "A Discontented Shareholder," I beg to state that purchasers of next year's rubber crops have been actuated mainly by the desire to secure supplies. The demand appears to be in excess of the supply, and New York houses have had the prudence to lay in stocks in time. Of course, in so doing they have had to take chances of decline in the market, but thereby they have eased the risk of the planters. As a matter of fact, the rubber has not been bought by speculators to hold, but has either been bought to cover sales actually made to manufacturers, or has at least been turned over to manufacturers immediately after purchase, and that at a price just sufficient to clear charges and give the purchaser a fair commission. As the larger part of the American purchases of 1910 rubber has been made through my agency I am in a position to speak with some authority. At the same time if planters will refuse to sell forward it will make business much easier for us. It is much easier to sell rubber for prompt shipment at market prices than to sell futures without knowing what will happen in the commercial world in the meantime.

New York, September 2, 1909.

This, so far as we are aware, is the first statement of the situation from the point of view of the buyer of crops forward, and it is a thoroughly satisfactory and straightforward one. In the United States, as well as in the United Kingdom and on the Continent—because the sale of Ceylon rubber crops for 1910 has not been confined to one country—manufacturers have for some months past had serious misgivings as to the supply of rubber being equal to the demand in 1910, and they have accordingly taken steps to guarantee their own needs being satisfied. This explanation, we are quite well aware, will not be acceptable to a good many people who are firmly convinced that natural causes are playing a comparatively small part in the present state of the rubber market, whilst speculation is the principal factor.

But, even allowing that far seeing operators on the rubber market foresaw the possibilities that lay ahead when the United States recovered from its financial prostration, and thus managed to some extent to control the situation, there is still an admitted shortage of available rubber, and the manufacturer who takes the long view and buys ahead can defend his action by sound reasoning. They fully realize that there is a chance of the market being a cheaper one next year, but prefer to take that risk and be sure of having the stock they require than to stay with the market and stand what they consider to be a considerably greater risk.

The concluding sentences in the above letter point out the risks which the buyer of forward crops runs, and there is a curious suggestion that it is the wicked planter who is responsible for forward contracts, and that, if he would only refuse to sell crops forward, the buyers of rubber would be delighted, as they are not in love with "futures."

* * *

THE "discontented shareholder" wrote again to the *Times*, pointing out the difference between results of one company this year and what they might have been, had not the company's directors sold rubber ahead, instead of waiting to sell at current prices. The final comment by the editor was:

"That sellers of the crops did not do so badly is well brought out in our correspondent's argument, for his whole grievance appears to be that one Ceylon company will only earn 100 per cent. for the year, instead of 150 per cent., upon which calamitous state of things it is clear that the shareholders are entitled to our deepest sympathy."

THE RIVAL RUBBER MARKETS.

THIS is from a leading article in *The Times*, of Ceylon: "Everything points to the rapid growth of the Colombo rubber market, as the advantages on the side of selling in Colombo are in many respects identical with the case of tea. The claims of London in the matter have disappeared with her monopoly of distribution. It is now accepted by a majority of producers that they can get better prices for their tea in Colombo, where it is brought on orders from London, Australia, America, and Russia, than in London. Since rubber is already being shipped direct to Antwerp and New York from Colombo there is the same likelihood of a healthier competition here, while the inconvenience and cost of transshipment and, above all, the excessive agents' charges in London, are saved. For the present the growth of the market has been arrested by the large amount of forward selling on contract, but it is bound

to take a leap forward as soon as the supplies increase and the market settles down to its normal state."

The entrance of plantation rubber upon the Antwerp market is due to the importance of the investments of Belgian capital in Malaysian plantations, the products of which as naturally find their way to Antwerp as British grown rubber to London. At the November Antwerp auction 36 tons of Malaysian rubber was offered.

But as has been seen, not even London attracts plantation rubber from Ceylon when it is to the interest of planters or merchants there to ship direct to America, as is now being done extensively. The Ceylon papers print regularly details of shipments of rubber direct to New York, and it does not appear improbable that before many years large estates in the Far East will be selling rubber direct to consumers, in whatever country they may be found, without reference to London.

And now comes Mr. W. Shakespeare, one of the Ceylon commissioners to the London Rubber Exhibition, who says in *The Times of Ceylon* that "there is every probability of the establishment of a plantation rubber auction" in Liverpool, in opposition to that in London. The freight from Colombo to Liverpool is the same as to London.

MORE FORWARD SALES.

THE Periyan Rubber Co., Limited, of Ceylon, have contracted for the sale of their 1910 crop up to 50,000 pounds, for Colombo delivery at 5.40 rupees[=$1.75.2] per pound. The estimated crop for this year, which is not being sold on contract, is 32,500 pounds; next year's crop is expected to reach 100,000 pounds. No dividend has been paid yet, but in view of the facts here stated the company's 100 rupee shares lately were being quoted at 530, with sales at that price.

The Grand Central Rubber Co., Limited, have sold their second grade crop of 1910 to a local house at 4.50 rupees [=$1.46].

The Uva Rubber Co., Limited, of Ceylon, have contracted for the sale of their 1910 crop of best biscuit, or sheet rubber, Colombo delivery, up to 10,000 pounds, at 5.05 rupees [=$1.63.8].

Mention is made of a sale of rubber at Colombo on September 20 at 6.10 rupees [=$1.98]. *The Times of Ceylon* (September 30) said: "Locally, there is a very strong demand for rubber in small parcels or large. No 1911 crops have as yet been sold, but this development is soon expected."

The Klanang Produce Co., Limited, are reported from London to have sold their 1910 crop of sheet rubber at 7*s.* 8*d.* [=$1.86.5] and crepe at 7*s.* [=$1.70.2]—the highest figures for forward sales yet quoted.

WHAT "SYNTHETIC" RUBBER LACKS.

A RECENT issue of *The Financier* (London) contains a communication from which this pointed extract is made:

"I venture to think that people who talk so glibly about the danger to the rubber-growing industry, owing to the fears of a 'synthetic' rubber being discovered which will compete with the natural product, have overlooked several important points in connection with rubber which do not apply to other articles that have been imitated successfully by chemists. In the case of indigo, for instance, that was merely a dye, and it was only the color which the indigo plant gave which rendered it so valuable, until a substitute was discovered. I have talked this matter over with two leading analytical chemists of large experience, and they both agree, that, while it is possible to imitate chemically almost any natural substance that is known, yet that, in regard to rubber (even if the cost were not prohibitive), there are mechanical qualities essential to the successful imitation which cannot be put in artificially, and are only the result of nature's growth. Rubber, to be a commercial success, requires tensile strength, resiliency, elasticity and durability; it is the combination of these qualities which makes rubber so important in the manufacturing world. So far, I understand, none of the substitutes hitherto discovered meet these requirements to any great extent."

THE VISCOSITY OF INDIA-RUBBER.

BY PHILIP SCHIDROWITZ, PH.D., F.C.S.

IN January of this year I published, in collaboration with Mr. H. A. Goldsborough, a paper under the heading "The Viscosity of India-Rubber and India-Rubber Solutions" in the *Journal* of the Society of Chemical Industry. The paper had special reference to the bearing of viscosity of india-rubber solutions on the strength of "nerve" of rubber. Since this paper appeared we have carried out a further extensive series of experiments, full details of which will be published later on, but the subject is of such practical importance to the producer of raw rubber and to the manufacturer, that I may be excused for stating briefly the general trend of the further results obtained.

In the first place, I may say that the opinions which I expressed regarding the probable practical aspect of testing raw rubber by the viscosity method has been amply confirmed, and the application of the viscosity test in the commercial examination of crude rubbers has become a matter of everyday occurrence in my laboratory. I have no longer the slightest doubt that this method is practicable in its application and practical in its bearing. In regard to most crude rubbers, and particularly in regard to the new varieties or forms which are constantly appearing on the market, it is in my opinion the only method which enables one rapidly to ascertain the relative strength or "nerve" of the samples. This is obviously a matter of importance to the middleman or to the manufacturer, who has either not the facilities or not the time to carry out satisfactory vulcanization experiments.

Again we have found the method to be of considerable practical value where there is a question of differentiating between various methods of coagulation in the case of the raw product, and of selecting the most suitable method. Here again the viscosity method is the only one which permits of a rapid and practical estimate of nerve. In cases where such determinations can be amplified by vulcanization experiments, so much the better, but in the majority of cases arising in practice I have found that this is out of the question. Again I have found that the test is useful to indicate how washed or crude rubber in stock is behaving, *i. e.*, whether it is improving or deteriorating. The method should, I think, also be of aid to the producer of raw rubber for the purpose of controlling his manufacture.

There appears to be a distinct variation between different *species* of rubbers as regards their viscosities; for instance, whereas we obtain from the finest Brazilian specimens of *Hevea* viscosities not ranging higher than 14,000, clean African *Funtumia*, if properly prepared, will range as high as 20,000. It is possible that the reason for this is that as Harries has suggested, the actual rubber molecule is different in different species. For the present I think it is advisable in regard to judging crude rubber by the viscosity method from the point of view of ascertaining the strength of the final vulcanized product, to compare only varieties of the same species and not different species with one another, although even as between species and species it will probably hold good, broadly speaking, that rubbers showing high viscosities will give stronger goods than those which give lower viscosities. In addition, I should like to point out that the viscosity numbers given in the first paper on this subject (see above) are, for reasons already indicated there, too low. Roughly speaking, I expect for good Brazilian *Hevea* a viscosity of 10,000 to 12,000; plantation *Heveas* range from 4,000 up to about 11,000; good class *Futumia* will give from 15,000 to 20,000. Further details regarding the matters referred to in this brief note will be published later on.

London, October 29, 1909.

Some Sources of Crude Rubber.

AN AMERICAN FIRM IN THE PARA TRADE.

THE president of Brazil has signed a decree authorizing the operation in that republic of Leite & Co., Incorporated, a corporation under the laws of Delaware, one of the United States of America. The purpose of the company is to acquire and take over the business of Joaquim M. Leite and Angelo A. Leite, constituting hitherto the firm of Leite & Co., merchants at Pará Brazil. The initial capital stated is $3,100, in shares of $100. The duration of the company is not stated. The name of Leite has long figured importantly in the rubber trade on the Amazon, and it may be mentioned that during the last business year the firm of Leite & Co. stood tenth in a list of 101 receivers of rubber taken into account at Manáos, some 620 tons being credited to them. A recent volume of Amazon views shows two steamers, which the firm keep employed in their trade on the Amazon, of 322 and 338 tons respectively. It was through this firm and on one of these steamers (the *Eurico*) that was shipped the enormous piece of rubber mentioned in THE INDIA RUBBER WORLD, May 1, 1909 (page 298). Leite & Co., originally and still owners of *seringaes* upriver, and particularly in the Acre district, have become important *aviadores* as well; they are thus producers of rubber to a large extent, and in a position to export rubber on the best terms possible under the Brazilian customs regulations. In other words, their position is comparable with that of the Alves Braga Rubber Estates and Trading Co., Limited, another Amazon firm lately registered as a public company under the English laws. Firms and corporations wholly Brazilian are not required to secure the sanction of the federal government to do business in Brazil; this requirement exists only with regard to companies having a legal domicile abroad, as in the case of Leite & Co. and the Alves Braga company. The amount of capital mentioned in the initial papers ($3,100) of course bears no relation to the scope of the business of Leite & Co.

PROFITS OF THE ALVES BRAGA COMPANY.

THE statements which appeared recently in THE INDIA RUBBER WORLD regarding the new régime in the Amazon regions, under which the crude rubber interest is becoming concentrated and more systematic methods adopted, have further confirmation in the statements made public at the first annual meeting of the Alves Braga Rubber Estates and Trading Co., Limited (London, November 9). This is now an English public company, formed to acquire and continue a long established business on the Amazon [see THE INDIA RUBBER WORLD, September 1, 1909—page 421]. The authorized capital is £440,000 [=$2,141,260], of which practically no shares have been issued except on account of purchase of the business of Alves Braga & Co. The amount issued or to be issued on this account is £300,000 [=$1,459,950], no cash being paid for the property. The members of the original firm are, therefore, the practical owners of the new company. Some figures in the recent report may be of interest as showing the magnitude of the company's operations. The book cost of the *seringaes* (rubber estates) owned by the company is £61,426, and their area 215,000 acres, with *estradas* opened up on which are nearly 300,000 rubber trees. The company hold mortgages to the amount of £170,919 on other *seringaes*, to cover advances of goods or cash, the mortgages carrying with them the exclusive right to handle the rubber produced. The mortgaged estates are valued at £220,000, and cover 504,125 acres. The company are also *aviadores* (consignees) to estates extending over 460,000 acres, so that they have facilities for obtaining rubber from more than 1,000,000 acres [=1,562 square miles, or largely more than the area of Rhode Island]. The company own several Amazon steamers.

The company owed in Pará on June 30, £91,214 for goods bought for *seringaes* upriver, and to be liquidated out of the next crop proceeds. There was also charged to rubber estates agents, as advances, £43,303.

The average profits of Alves Braga & Co. for six years, 1903-1908, are stated to have been £32,274, with rubber prices ranging from a minimum of 2*s.* 9*d.* to 5*s.* 9*d.* per pound.

DE MELLO TO BE REORGANIZED.

THE results attained to date by the largely capitalized De Mello Brazilian Rubber Co., Limited, registered in London in July, 1906, to acquire from S. F. De Mello and carry on what was reported to be an extensive business in rubber trading in the Acre district, have been far from stisfactory. At a special meeting of shoreholders in London on September 23, the chairman pointed out that from the beginning there had been a lack of working capital, due to which large loans had been necessary, at a heavy charge for interest. In consequence all their expenditures had been at an abnormally high rate. At the same time rubber had fallen very low at one period, so that business had been done at a loss. *The Financier's* "Rubber Share Handbook" mentions that the accounts for the business year ended June 30, 1908, although 390 tons of rubber were traded in, showed a loss of £28,500 [=$138,695.25]. The accounts for the last year have not been made public, but the chairman asserted that, in view of the advance in rubber, a considerable profit would be shown.

The object of the meeting was to consider proposals whereby funds would be supplied for paying off the debts of De Mello Brazilian Rubber Co., after which it would be liquidated, the business then to be reorganized. The sense of the meeting was that this would be the wiser course, and arrangements have been begun for creating the proposed new company.

BALATA AND RUBBER ON THE ORINOCO.

THE rubber forests of Venezuela are the subject of a report by the United States consul at La Guaira. The native rubber tree is described by him as the *Castilloa elastica*, and found principally in Sucre and the Amazonas territory. Besides there is balata, in the districts of Jeres and the Orinoco delta. Both rubber and balata are conveyed to Ciudad Bolivar on mule back or in ox carts. The price paid per pound in Ciudad Bolivar is 32 to 40 cents for balata and 65 cents to $1.10 for india-rubber. These materials are found solely upon government lands, to work which concessions can be obtained.

RUBBER EXPORTS FROM BOLIVIA.

THE output of crude rubber from Bolivia continues to show a slight increase, the rate of which is expected to advance upon the completion of the Madeira-Mamoré railway, when better transportation facilities will exist. The exports for two years past are reported by the French legation at La Paz at 4,027,128.6 pounds in 1908 and 3,606,664.6 pounds in 1907. Bolivian official figures for certain preceding years were: 2,906,274 pounds in 1903; 3,456,481 pounds in 1904; 3,720,908 pounds in 1905.

LESS RUBBER FROM MADAGASCAR.

THE hopes which at one time existed that Madagascar would become an important producer of rubber, it seems, are not likely to be realized, in spite of the abundance of plants on that island capable of yielding rubber of a good quality. The maximum production of rubber in Madagascar was reached in 1906, when 1,264,764 kilograms were exported, representing a value of 7,511,332 francs. In 1907 the exports fell to 812,930 kilograms, with a value of only 5,249,462 francs. For the first five months of 1908 the exports reached only 121,296 kilograms.

Recent Patents Relating to Rubber.

UNITED STATES OF AMERICA.

ISSUED OCTOBER 5, 1909.

NO. 935,629. Water nozzle. A. Allbright, New York city, and G. G. Scudder, Babylon, N. Y.

935,837. Valve for pneumatic tires. F. T. Clayton, Sandwich, Mass.

935,849. Apparatus for washing caoutchouc, gutta-percha, and similar substances. F. Kempter, Stuttgart, Germany.

936,008. Means to connect tires to rims of wheels. E. R. Merigoux, Paris, France.

936,142. Metallic elastic tire for vehicles. G. Magaldi, Buccino, near Salerno, Italy.

Trade Marks.

30,116. The Mechanical Rubber Co., New York city. The words *Warranted 2-X-L*, on a section of belting across the diameter of a wheel. For rubber water bottles and syringes.

44,266. Apsley Rubber Co., Hudson, Mass. The word "Deliverer." For rubber footwear.

ISSUED OCTOBER 12, 1909.

936,416. Tire. [Comprises a plurality of compression members.] W. B. Connell, assignor of one-third each to J. J. McGraw and A. A. Shideman, all of Chicago.

936,468. Process of reclaiming devulcanized rubber. [The process of depolymerizing rubber waste, which consists in first devulcanizing the same by treating it with a mixture of two solvents, the one of which is a rubber solvent, while the other is not, and finally treating it with a neutral resinous soap at a temperature in excess of 120° C. and under pressure in excess of atmospheric pressure.] E. E. A. G. Meyer, New Brunswick, N. J.

936,537. Spraying nozzle. A. B. Hull, Gasport, N. Y.

936,566. Hose coupling. N. M. Rosendahl, Chicago.

936,627. Hose coupling. A. A. Hill, New York city.

936,635. Apparatus for washing caoutchouc and similar substances. F. Kempter, Stuttgart, Germany.

936,658. Packing. [As a new article of manufacture, a sheet of packing comprising a central body or base of asbestos, a rubber coating upon said base, a fabric cover cloth adjacent said base, having a rubber coating upon the side next thereto, and a coating of heat resistant material upon the outside of said cloth.] D. S. Paterson, Philadelphia.

936,810. Elastic tread for boots and shoes. P. W. Pratt, Boston, assignor to C. F. Brown, Reading, Mass.

936,837. Tire. [Pneumatic; clincher rim.] H. L. Walbridge, assignor to The Chandler Co., all of Springfield, Mass.

936,886. Hose coupling. E. J. Hannold, St. Louis, Mo., assignor to C. M. Clay.

936,988. Horseshoe calk. J. E. Dolan, Geneseo, N. Y.

936,994. Wheel, [with annular pneumatic tubes]. A. C. Gillan, Hicksville, Ohio.

937,021. Braided fabric and process of making it. H. Z. Cobb, Chelsea, assignor to Revere Rubber Co., Boston.

Trade Marks.

41,882. Shawmut Tire Co., Boston. The representation of an owl. For rubber tires.

44,032. L. M. Rumsey Mfg. Co., St. Louis. The word *Resmur*. For rubber hose, packing, and valves.

ISSUED OCTOBER 19, 1909.

937,186. Tire for vehicle wheels. F. A. Seiberling, Akron, Ohio.

937,405. Hose coupling. A. W. Abraham, Oshkosh, Wis.

937,425. Cushion heel for shoes. J. G. Daubert, Loudonville, Ohio.

937,437. Hose coupling. H. Halstead and L. Niksch, Hobart, Ind.

937,528. Grip tread for vehicle wheels. F. Holan, Niobrara, Nebr.

937,535. Heel. W. C. Kempton, San Francisco, Cal.

Trade Marks.

26,471. The Hartford Rubber Works Co., Hartford, Conn. For tires.

28,180. The New York Belting and Packing Co., Ltd., New York city. The words *The Czar*. For rubber belting and hose.

42,580. Empire Rubber Mfg. Co., Trenton, N. J. The initials *O. and S. P.*, beneath a semi circular line. *Oil and Steam Proof*, and over the name of the company in a straight line. For rubber packing, belting, and hose.

ISSUED OCTOBER 26, 1909.

937,787. Tire construction. G. E. Garon, Manchester, N. H.

937,808. Vehicle wheel [with pneumatic tire]. E. Hopkinson, East Orange, N. J.

937,812. Tire armor. R. E. Johnson, Caledonia, Minn.

938,095. Hose coupling. F. Vlach, Chicago, Ill.

938,311. Pneumatic tire armor. L. W. Galloway, Norwood, Colo.

938,371. Detachable tread for automobile tires. T. M. Davey, Buffalo, N. Y.

Reissues.

13,028. Resilient tire. H. Klingler, Sitterdorf, Switzerland.

Trade Marks.

43,441. The Hartford Rubber Works Co., Hartford, Conn. The word *Dunlop*. For rubber tires.

[NOTE.—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each postpaid.]

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of these listed below was in 1908.

* *Denotes Patents for American Inventions.*

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, OCTOBER 6, 1909.]

12,319 (1908). Pneumatic tire tread. G. C. Taylor, Helsby.

12,356 (1908). Spare wheel carrier. J. A. Flewitt, Aston, Birmingham.

12,448 (1908). Mold for plates for heel pads. J. O'Brien, London.

12,480 (1908). Puncture preventing non skid band for tires, of leather and rubber or other materials. J. G. Patterson, Darlington.

12,497 (1908). Detachable rim for pneumatic tires. V. H. Riehl, Antony, France.

12,578 (1908). Protector for the toe portion of boots. E. Jay, London.

*12,637 (1908). Inner and outer wooden rims, one or both of which may be surrounded by shrunk-on metal bands separated by solid or inflatable india-rubber cushions, and connected at the sides by flat suspension rings of india-rubber. J. Liddle, Glasgow. (R. W. Sewell, Brooklyn, New York.)

12,705 (1908). Regulation of the supply of gas to a vulcanizing mold. A. M. Woodward, Bournemouth.

12,707 (1908). Laceless football. S. Williams, Oswestry.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, OCTOBER 13, 1909..]

12,860 (1908). Fabric for pneumatic tires. C. M. Gautier, London.

12,861 (1908). Fabric for pneumatic tires. *Same.*

12,873 (1908). Tire inflating device operated by the working of a motor car. R. Barnfather, Croydon.

12,949 (1908). Pneumatic tire, the inner tube of which has a safety chamber on the tread side. F. L. Ochs, South Croydon.

13,032 (1908). Pneumatic tire cover. Michelin et Cie., Clermont-Ferrand, France.

13,040 (1908). Pneumatic tire with studded tread. G. Hookham, Birmingham.

13,042 (1908). Tire composed of a helical spring enclosed in a cover of leather rubber. A. L. C. de Carlshausen, Millau, France.

13,102 (1908). Tire of the helical spring type with leather or rubber cover. *Same.*

13,138 (1908). Wheel with two or more pneumatic tire carrying rims side by side. W. R. Hughes and P. Cave-Moyle, Belmont.

13,140 (1908). Device for keeping pneumatic tires cool by means of water tanks and nozzles carried by the vehicle. Michelin et Cie., Clermont-Ferrand, France.

13,176 (1908). Tire tube cored to prevent collapse when punctured. H. Musclow, Vancouver, Canada.

13,182 (1908). Tire of the helical wire type enclosed in leather or india-rubber. A. L. C. de Carlshausen, Millau, France.

13,205 (1908). Tire of wood tread blocks supported upon a bed of rubber. G. Sosnowski, London.

13,241 (1908). Pneumatic tire having a protective pad of sponge rubber between the air tube and tread. B. E. D. Kilburn, London. (Neue Automobil-Reifen-Fabrik Gesellschaft, Berlin.)

13,251 (1908). Solid rubber tire. A. T. Collier, St. Albans, and Reilloc Tyre Co., London.

*13,284 (1908). Protective non slipping tire cover, including metal sections. C. C. Cook, Bertrand, Nebraska.

*13,285 (1908). Horse shoe pad. J. Dillon, Hackensack, New Jersey.

13,302 (1908). Pneumatic tire with means for preventing side slip. G. S. Sayner, Harrowgate.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, OCTOBER 20, 1909.]

13,350 (1908). Pneumatic tire with non-slipping studs. L. A. Noël, Paris, France.

13,365 (1908). Pneumatic tire with leather cover. W. Jones, Stoke-on-Trent.

13,375 (1908). Pneumatic or other tire with tread formed of a fabric on edge. S. Z. de Ferranti, Grindleford Bridge, Derbyshire.

13,467 (1908). Tire of laminated leaf springs enclosed in leather or rubber. C. Simon, Chatellerault, France.

13,483 (1908). Pneumatic tire with metallic tread sections, holding wooden blocks. I. Henson, Quarndon, Derbyshire.

13,489 (1908). Method of attaching single or twin tires and their rims to the felloes. R. Reid, Polmadie, Glasgow.

13,531 (1908). Pneumatic tire the cover of which is filled with a resilient composition in which are embedded solid or hollow balls of raw Pará rubber. W. P. Mulie, Leiden, Holland.

13,599 (1908). Rubber reclaiming. In regenerating waste rubber and vulcanite with the aid of heat and pressure air is exhausted from the mold or other apparatus in which the operation takes place. W. H. Hyatt, Cookham, and P. D. Penn, South Croydon.

13,606 (1908). An emergency brake which in the case of rubber tired wheels may serve to prevent side slip. G. J. Robbins, Gathurst, Lancashire.

13,864 (1908). Pneumatic tire having a removable filler between the air tube and cover. T. J. McBride, Christchurch, New Zealand.

*13,882 (1908). Solid rubber tire supported by a series of springs in sockets in the rim. W. Muller, Philadelphia.

[ABSTRACTED IN THE ILLUSTRATED OFFICIAL JOURNAL, OCTOBER 27, 1909.]

*13,984 (1908). Pneumatic tire with protector of leather bands. O. A. Eastman, Platteville, and I. J. D. Fairhurst, Janesville, Wisconsin.

13,997 (1908). Pneumatic tire. E. Kempshall, London.
14,053 (1908). Sole and heel protector. A. Neurath, Pressburg, Hungary.
14,062 (1908). Method of painting golf balls. A. Powell, London.
14,088 (1908). Heel protector. H. Fairbrother, London. (E. Clark and two others, Victoria, Australia.)
14,121 (1908). Electrically heated portable vulcanizer, for tire repairs. J. Hay, Hagg Crescent, Johnstone, and two others.
*14,122 (1908). Manufacture of a rubber boot. J. J. Mulconroy and E. S. Morris, Philadelphia.
14,125 (1908). Non skid device for tires—strips of cotton belting steel studded placed on the tread at intervals. A. E. J. Smith, London.
14,308 (1908). Sole and heel protector. R. H. Sibley, Northampton.
14,354 (1908). Tire tread constructed with fabric bases provided with loops of coir yarn. G. D. Rose, Manchester.
14,388 (1908). Pneumatic tire with puncture proof tread. G. Inrig, London.
*14,430 (1908). Spring wheel with elastic tire. J. S. Cushing, Norwood, Massachusetts.
14,435 (1908). Spring wheel with inner pneumatic cushion. V. G. Delgado y Olazabal, Madrid, Spain.

THE FRENCH REPUBLIC.

PATENTS ISSUED (with Dates of Application).

401,481 (April 1). M. Gerono and J. B. Pauwels. Tire protector.
401,644 (April 3). H. L. Owen. Machine for insulating wires.
401,619 (April 3). F. Gratiena. Rubber tubing.
401,573 (March 26). Boyowitch. Metallic tire protector.
401,585 (July 30, 1908). L. Wackernie. Pneumatic tire.
401,632 (Aug. 1). G. Marbach. Pneumatic tire.
401,696 (April 6). A. Warchalowski. Process for replacing tubes in pneumatic tires.
401,547 (July 28, 1908). Hoffmann, Benoist and Torrini. Substitute for ebonite and like materials.
401,754 (Aug. 8, 1908). C. E. Veil Picard. Pneumatic tire filled in part with sponge rubber.
401,758 (Jan. 25, 1909). L. Liais. Pneumatic tire.
401,770 (March 13). A. Maury. Protective tread for pneumatic tire.
401,776 (March 27). Société Francais du Truril et du Caoutchouc and M. Brémant. Application of asbestos to the manufacture of pneumatic tires.
401,843 (April 8). C. L. Baldwin. Closure for tire puncture.
401,901 (Aug. 13, 1908). A. Jacqz. Puncture proof tire.
401,959 (Feb. 10, 1909). Société Générale des Etablisements Bergougnan et Cie. Removable tire rim.
401,965 (April 10). The Republic Rubber Co. Vehicle tire.
401,682 (April 13). E. Kempshall. Pneumatic tire.
402,098 (April 16). Société Générale des Etablisements Bergougnan et Cie. Vehicle tire.
402,192 (April 19). H. de la Valette. Electric cable.
402,414 (April 26). Société Deborger et Cie. Fabric for pneumatic tires.
402,419 (April 26). P. Colliard. Tire protector.
402,512 (April 29). A. W. Carpentier. Pneumatic tire.
402,380 (April 8). Perrin, Zahn and Schallier. Heel pad.
402,612 (May 1). J. Csik. Wheel and pneumatic tire.
402,692 (May 4). G. M. Badger. Elastic wheel.
402,730 (Sept. 4, 1908). Bonnet and Lecerf. Non puncturable tire.
402,765 (May 6, 1909). J. Spyker. Elastic wheel.
402,766 (May 6.). J. Spyker. Construction of elastic wheel with pneumatic chamber.
402,780 (May 7). C. Troequenet. Construction of elastic tires.

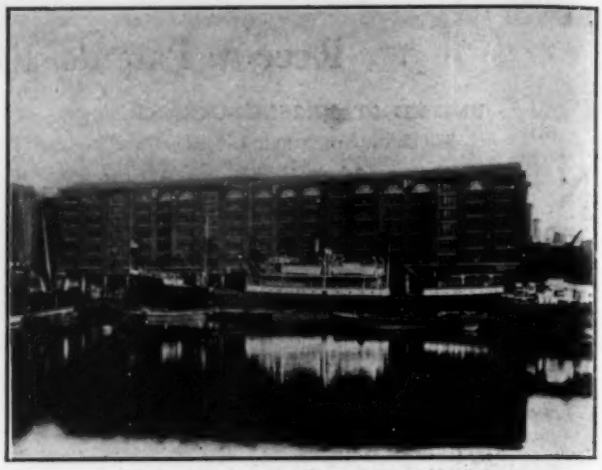
[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingenieur-Conseil, 16 avenue de Villier, Paris, at 50 cents each, postpaid.]

CEYLON.

SEALED UNDER THE INVENTIONS ORDINANCE, 1906.

1,048. George Smith Brown, Talawakele. For cutting and paring or shaving the bark or cortex of india-rubber trees or plants in the process of obtaining the rubber latex therefrom. Sept. 16, 1909.
1,087. Wilmot Arthur de Silva, Colombo. A latex extractor. Sept. 16, 1909.
1,086. Alexander Cameron and David Stuart Cameron, Nawalapitiya. Tapping rubber trees for latex, and other trees for their exudations, entitled latex releaser. Sept. 23, 1909.

COMMISSIONERS from the federal district of the Acre recently visited Rio de Janeiro for the purpose of laying before the government the claims of this territory to statehood. The resident population is estimated at 70,000, and is increasing constantly as a result of the settlement of the rich rubber regions there from Ceará and other drought affected states. In 1904 Brazil paid Bolivia as indemnity for the Acre region 32,000 contos [=$9,600,000] and up to June, 1909, the government had received in export duties on rubber from this territory 62,000 contos [=$18,600,000] or double the amount paid, in addition to several thousand contos in revenue derived from import duties.

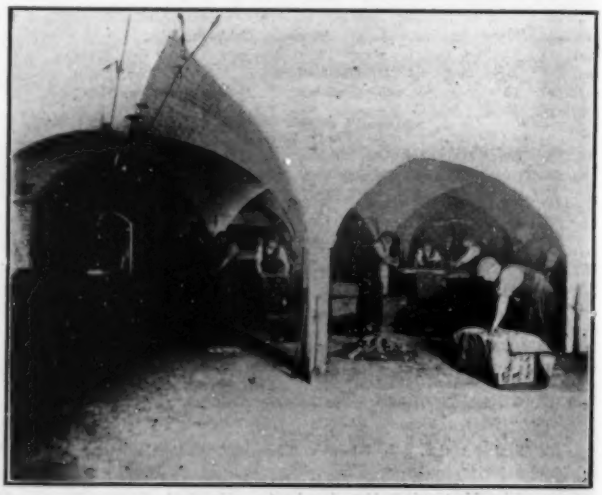


ST. KATHERINE DOCK, LONDON.

[Exterior of the India-rubber and gutta-percha warehouse of the London and India Docks Co.]

STORAGE OF RUBBER IN EUROPEAN PORTS.

THE commerce in india-rubber and gutta-percha these days has come to have many ramifications. Not the least interesting feature is the storage of these raw materials in the leading ports of receipt for consumption. Two views on this page relate to the premises of a company in London, in whose vaults and warehouses is stored, sooner or later, an important proportion of the rubber and gutta-percha arriving at that port. The company referred to is the London and India Docks Co., with offices in Leadenhall street. The premises set apart for their rubber business are situated in the St. Katherine dock, near the offices of the principal brokers and merchants in this branch. Since these views were taken the property and some other dock properties in London have been taken over by the city, so that rubber and other commodities imported there are now under control of municipal authorities until passed into trade. The object of the city was to acquire ownership of valuable real estate, with a view to making London ultimately the best equipped shipping port in the world.



ST. KATHERINE DOCK, LONDON.

[Interior of Vaults. Sampling Plantation and Borneo rubber. Warehouse of London and India Docks Co.]

A LEADING CITIZEN OF PARA.

[COMMUNICATED.]

THE occurrence during the present month of the birthday anniversary of Senator Antonio José de Lemos, of Pará, who is often referred to as the most prominent personage in the north Brazilian states, suggests that a brief sketch of his career may be of interest to the readers of THE INDIA RUBBER WORLD. The new régime in the rubber situation in the Amazon region, to which numerous references have been made in these pages during the past few months, has been promoted in no small degree by Senhor Lemos, either as a member of the senate of his state, as editor of the leading newspaper on the Amazon, or in his capacity as a creator of public opinion in that part of the republic in his capacity as a leading citizen.

Antonio José de Lemos was born in Maranhao—the province south of Pará—on December 17, 1843. When 17 years of age, after having passed his first studies in the city college of Maranhao, he joined the Brazilian navy, and on board the corvette *Paraense* he assisted in the war with Paraguay—the war of the triple alliance—as ship's clerk. On the same corvette he, on February 2, 1867, arrived for the first time in Pará, where it was his fate to remain and work for the progress of the great Amazon region. He was nominated there as secretary of the port and navy yard, but this work proved not to be in keeping with his ambition.

SENADOR ANTONIO JOSE DE LEMOS.

He seemed naturally inclined for journalism and in this field his first marked sucess was attained. After editing the journals *O Pelicano, O Tacaoe,* and *Liberal do Pará,* he became the editor of *A Provincia do Pará,* upon its establishment on March 25, 1876, since which time he has remained at its helm. He has become one of the most accomplished and successful editors and publishers in Brazil, and made this paper one of the most influential in the republic. Such important questions as the abolition of slavery and the substitution of republican government for the monarchy were treated by the then young editor of *A Provincia do Pará* in so forceful a manner as to create political parties to enforce the liberal opinions of the paper.

In 1885 Senhor Lemos was elected a representative in the state legislative assembly and at the time of the proclamation of the republic, in 1889, he was *intendente* (mayor) of the city of Belem, which is the local name of the capital of the state of Pará. He was elected to the mayoralty for the second time in 1898, since which year he has been unanimously reëlected for every term to the position of chief administrator of this important city of the Amazon.

For some time he has also been state senator, taking an active interest and exerting a vital influence in all important questions of administration and legislation. During the sitting of the legislative assembly the actual work of the mayor is performed by a substitute. As the chief in Pará of the predominant political party (*partido republicano*) Senor Lemos's opinion is much considered by the federal government. Senator Lemos has been largely instrumental in the modernization of Pará, including the embellishment of the city with parks, tree-lined avenues, paved streets, electric car lines, and electric lighting.

Senator Lemos has been particularly interested in the establishment of charitable institutions. Due to him was the creation of an asylum for poor people, one of the best public buildings of the city (Azylo de Mendicidade). The orphan asylum (Orphanato Senador Lemos) has his constant attention. The great improvements in the hospitals Orden Terceira and Santa Caza de Misericordia has to be considered, especially the latter, one of the best in Brazil, are due to the fact that the president of the board of directors is Senator Antonio Lemos.

All the benevolent associations in the state of Pará have Senator Lemos as an honorary president or honorary member. He is also commandant colonel of the state national guard. Senator Lemos is a great friend of the foreigners who come to the Amazon, and especially is he an admirer of the Americans.

LONDON'S ANNUAL RUBBER HEEL SHOW.

IT was said by some one of the International Shoe and Leather Fair, held at Agricultural Hall, London, during the first week in November, that it "would be better described as a shoe, leather, and rubber fair," in view of the good number of exhibits of rubber heels, overshoes, and the like. As was the case last year, the American trade was well represented. As usual, with the exhibits of leather in general and leather shoes in particular THE INDIA RUBBER WORLD, in this connection, has little concern, but a detailed account of the rubber exhibits alone would fill more space than can be spared here for the whole exhibition.

The United States Rubber Co., Limited—as the European department of the big American company is known—as usual had on view an extensive display of the various forms of waterproof footwear made by this corporation.

The Hood Rubber Co., Limited—the foreign branch of the Hood Rubber Co. (Boston)—in addition to a full line of their output of footwear, exhibited a model of their factory, which is in the first rank, as to size and production, among the world's rubber shoe plants.

The B. F. Goodrich Co., Limited—here is another American concern with a branch registered under the British laws—were represented by a display of their rubber footwear, now on the foreign market for about a year. As at previous shows, they exhibited their own "Majestic" heel pad, and the O'Sullivan heel, which they market extensively in Great Britain.

Prominent in the show was the stand of The India Rubber, Gutta Percha, and Telegraph Works Co., Limited, of Silvertown. Here was an exceptionally varied stock of heel pads, revolving and stationery, at all kinds of prices, and in various colors. There were also sporting requisites—golf balls, football bladders, and the like.

The North British Rubber Co., Limited, the leading makers of rubber boots and shoes in the United Kingdom, showed specimens of all their products in this line, as well as other rubber goods of different kinds.

Calmon Asbestos and Rubber Works, Limited, representing the important Hamburg house of Calmon, exhibited a number of novelties, including an asbestos sock, which is fitted to "Plim-

soils" and gymnastic shoes, and greatly minimizes the drawing of rubber soles.

Another foreign house represented, in the footwear line, was Etablissements Hutchinson, of France, through their branch in Basinghall street, London, who never fail to present attractive new patterns and shapes.

The preceding list falls far short of exhausting the rubber features of the show. Heels have been mentioned in connection with some of the exhibits referred to, but there were other heels. It was, in fact, a rubber heel show, for the Britishers are still rubber heel mad. Among the concerns devoted to this output alone were:

Wood-Milne, Limited, Preston.
Tacipeds, Limited, Birmingham.
The India Rubber Manufacturing Co., London.
Redfern's Rubber Works, Limited, Hyde.
The Palatine Heel Co., Limited, Preston and London.
The Lancashire Revolving Heel Co., Limited, Manchester.
Wallington, Weston & Co., Frome.
Hickson & Co., Stockton-on-Tees.
Philipps's Patents, Limited, London.

It would appear that, with so many firms in the field, after so many years, anything very new in the way of rubber heels would be impossible, but the International show this year brought to light probably more "novelties" in the way of heels than in any previous year. Certainly any heel which differs from another enough to permit of a British patent for it to be obtained may be exhibited as a novelty, and most of the different heels shown were protected by letters patent, in respect either of design, method of attachment, or something else overlooked by previous inventors.

There is to be a Boot and Shoe Exhibition at Birmingham, in January, at which a number of the firms mentioned in this report will be represented.

* * *

THE factory of Wood-Milne, Limited, at Preston, alone, is reported to be turning out an average of about 25 tons of rubber heels every week or 1,300 tons a year. They are said to be contemplating the erection of new works at Leyland, to cost £40,000 [=$194,660], and to take on in addition the manufacture of tires and mechanical and surgical rubber goods. The company maintain a very extensive Irish office and warehouse in Dublin—at No. 149 Donegal street.

BRAZIL'S EXPORT OF RUBBER.

THE figures herewith indicate the weight in kilograms of the exports of rubber from all the ports of Brazil, *of rubber produced in that republic,* during the past five calendar years. They have been compiled from the returns of the federal bureau of statistics of Brazil, and are in continuation of a similar table presented in THE INDIA RUBBER WORLD, April 1, 1908 (page 246). We have had occasion before to refer to the high degree of efficiency to which the statistical office referred to has been developed, and the figures which follow may be regarded as representing very closely the totals of the rubber manifests from the different ports.

It will be observed that these figures relate to shipments by calendar years, whereas the Pará and Manáos figures presented periodically in this paper relate to "crop years." Besides, the latter include the output from the whole Amazon region, whereas the figures on this page report the Brazilian output alone. This, as will be seen, still shows a tendency to increase. The increase, however, in 1908 as compared with the preceding year, has been solely from the Amazon river ports.

For several years each annual statement showed a gain in the production of "maniçoba" (Ceará) and "mangabeira" rubbers, which are produced south of the Amazon and find an outlet through southern ports. During the last year the production of these rubbers showed a considerable decrease, which may have been due to the effect of the decline in rubber prices which was felt throughout the world. This decline in prices was liable to have less effect in the Amazon valley, where the rubber interest has existed longer and on a larger scale, and is organized more systematically. It will be necessary to have the figures for another year, covering the period of the revival of the crude rubber trade, in order to determine whether or not Brazil is producing more rubber. It is true that the figures given show a larger "grand total" for 1908 than for any former year, but this includes an increased production of caucho, a type of rubber not collected formerly in Brazil and also a type which under the methods now in use does not yield a permanent return.

It is not possible, from the figures at hand, to determine whether more or less Pará (or *Hevea*) rubber is being shipped from Brazil. It must be kept in mind that statistics emanating from Pará relate to the whole rubber output from the Amazon region, covering a number of neighboring countries, so that the steady increase in the output from the Amazon is not derived from Brazil alone.

PARA RUBBER (INCLUDING CAUCHO).

PORTS.	1904.	1905.	1906.	1907.	1908.
Manáos	15,331,869	15,245,938	14,732,000	16,767,834	18,065,000
Pará	13,171,212	16,221,766	16,554,000	16,017,611	16,781,000
Corumbà	251,396	441,787	217,000	392,594	537,000
Itacoatiara	2,175	6,091	77,000	117,204	313,000
Maranhão	13,410	82,646	13,000	12,993	
Ilha do Cajueiro	18,344	17,296	49,000	74,355	
Porto Murtinho.	3,800	2,761	1,000	.....	
Total	28,792,206	32,073,285	31,643,000	33,382,681	35,696,000

CEARA RUBBER ("MANICOBA").

PORTS.	1904.	1905.	1906.	1907.	1908.
Ceara	668,809	589,218	715,000	588,854	579,000
Bahia	939,157	1,443,826	1,410,000	1,285,103	1,249,000
Ilha do Cajueiro	503,871	557,530	505,000	520,824	327,000
Pará	2,430	350	.....	.....	11,000
Maranhão	11,471	.....	700	1,710	
Cabedello	1,923	8,527	100	9,812	
Pernambuco	97,556	82,666	31,300	16,875	
Maceió	180	.....	200	.....	
Rio de Janeiro.	680	100	.....	.....	
Natal	.....	.....	.....	5,500	
Uossoro	.....	.....	1,700	.....	
Total	2,226,077	2,682,217	2,664,000	2,428,678	2,166,000

MANGABEIRA RUBBER.

PORTS.	1904.	1905.	1906.	1907.	1908.
Bahia	415,579	261,189	262,985	264,811	106,499
Rio de Janeiro.	85,195	105,413	129,044	75,586	52,607
Santos	128,991	95,190	88,535	100,931	33,092
Corumbà	56,383	74,733	81,722	75,800	80,337
Pará	541	2,805	1,114	.....	72,072
Maranhão	6,301	3,197	8,319	6,465	
Ilha do Cajueiro	35,316	29,773	22,026	39,896	
Ceará	6,935	19,019	7,001	4,777	
Cabedello	22,863	11,742	15,363	15,003	
Pernambuco	85,034	30,314	26,366	72,795	
Maceió	10,420	3,294	5,233	7,681	
Porto Alegre	350	.....	.....	.....	
Porto Murtinho.	1,300	480	3,901	815	
Natal	.....	.....	1,620	13,663	
Paranagua	.....	.....	10	15	
TOTAL	855,208	637,109	653,239	678,238	344,607
GRAND TOTAL	31,863,491	35,392,611	34,960,239	36,489,597	38,206,607

BRAZILIAN RUBBER EXPORTS, BY PORTS.

PORTS.	1904.	1905.	1906.	1907.	1908.
a Amazon ports.	28,508,227	31,477,950	31,296,000	32,902,738	34,963,000
b Atlantic ports.	3,042,385	3,394,900	3,361,517	3,117,650	2,625,470
c Interior ports.	312,879	519,761	302,722	469,209	618,137
Total	31,863,491	35,392,611	34,960,239	36,489,597	38,206,607

a Pará, Manáos, and Itacoatiara.
b On the Brazilian coast, South of Pará.
c Corumbá and Porto Murtinho, on the river Paraguay, discharging into the Rio de la Plate.

[NOTE.—The above figures do not embrace small shipments of "massaranduba" gum—a species of balata—from Pará, amounting in 1907 to 175 kilograms and in 1908 to 139 kilograms.]

CANADIAN TIRE PRICES.—The proud possessor of an automobile has suffered just as heavily as has the humble individual who never gets higher than an occasional pair of rubber heels. On July 15 the price of the smallest pair of automobile tires sold by the Dunlop Tire Co., was $20.15, the most expensive $146.80. On September 28 the same tires sold at $22.15 and $161.50, respectively, a very noticeable advance.—*The Toronto Star.*

In the Congo Rubber Country.

MINISTER RENKIN'S REFORM PROPOSALS.

SINCE the annexation of the Congo Free State to Belgium the reform of conditions in the African dependency has received much serious consideration at the hands of the government. The minister of colonies, Mons. Renkin, has made an extensive tour of the Congo colony, as a result of which he has made numerous representations and proposals to the Belgian chamber of representatives. From a resumé of these in *La Tribune Congolaise* (Antwerp) the following excerpts are made, as bearing more or less upon rubber interests:

"THE HARVESTING OF THE PRODUCTS OF GOVERNMENT LANDS.—What conclusions are to be drawn from the principle of government ownership? The minister has referred to the statement: 'I am not an enthusiastic supporter of government monopoly,' made by him in 1908.

"He thinks the time has arrived for gradually leaving to private enterprise the harvesting of the products of government lands (*domaine privé*), which are mainly rubber and gum copal. He proposes to carry out this reform measure in three stages or periods, to commence on July 1, 1910, July 1, 1911, and July 1, 1912.

"Under this plan the districts of the Lower Congo, the Pool, Kwango, Lulualaba Kasai, south of Sankuru, Katanga, the eastern province south of the latitude of Kamimbo, the Gurba Dungui territory and part of Lake Leopold II, and Equateur district would be surrendered to private enterprise on July 1, 1910. On the two subsequent dates, as aforesaid, the government would surrender the working of the remaining government lands, with the exception of five government tracts of an area of 600,000 hectares, which would be reserved.

"As regards the territories for which concessions have been granted, the government would subsequently examine into the question, whether or not it would be advisable to make different arrangements in agreement with the interested parties. Natives should have the right to harvest the products of the Government lands. In the territories surrendered to private enterprise the government would sell or lease to such parties parcels of land for the purpose of erecting factories.

"TAX IMPOSED ON THE NATIVES.—In his statement of the grounds on which the proposed budget is based, the minister subsequently enters into an examination of the question of taxes imposed on the native population. The system of compulsory labor is no longer practised in the Congo, and it is a manifest exaggeration to claim that a large proportion of the population has been reduced to a condition bordering on slavery.

"The minister states that conditions have already improved. He announces that the tax will henceforth be collected in money, but that the government reserves the right to take in certain cases appropriate measures in furtherance of the interests of the population.

"The tax payable in foodstuffs against a compensation for the same is to be abolished. Until all the provisions of the new system shall be in force, the natives may pay the tax in products of the soil, and will receive their compensation in money, such compensation to be based on the value of the product given in payment.

"The maximum native tax rate is to be revised, and the local tax rate modified whenever the returns justify such modification.

"REPLANTING RUBBER.—Entering into a consideration of the question of replanting, the minister announces his intention to abrogate compulsory replanting, as at present required of government agents and private parties.

"The minister purposes henceforth to levy a replanting tax, to be fixed either at 0.40 or at 0.20 francs per kilogram of rubber produced, either from trees or *lianes* (creepers). The government is to establish standard plantations.

"In his proposition the minister outlines an initial plan, providing for the annual establishment of rubber plantations covering an area of 2,000 hectares [=4,942 acres], during a term of ten years.

"In addition to the proceeds of the tax, an annual appropriation of 1,000,000 francs [=$193,000] is to be set aside for this purpose. The government intends to encourage the laying out of plantations by private parties, by selling them land."

[Reference is had in the last paragraphs to the regulation existing for some years in the Congo Free State, under which a certain number of rubber trees or vines were required to be planted for each ton of rubber exported.]

RUBBER IN THE CONGO BUDGET.

ACCORDING to the plan for the Congo budget for 1910, presented to the Belgian chamber of representatives, the proceeds of the sale of rubber are estimated at 13,397,500 francs, against 15,000,000 francs in 1909. This latter estimate was based on a production of 1,875 tons of rubber, of an estimated value of 8 francs per kilogram. The present budget is based on a production of 1,165 tons. If figured at a price of 8 francs per kilogram [=70 cents per pound]—*i. e.*, at the same price as in 1909, the value of the production would be 9,320,000 francs, which means a decrease in receipts amounting to 5,680,000 francs. The favorable condition of the rubber market, which has been constantly improving and becoming more firmly established since the end of last year, allows, however, of figuring on the basis of a higher selling price. The price on which the estimate for 1910 is based is 11.50 francs per kilogram [=$1 per pound], which figure is below the market price as quoted during the past few months. In consequence of the present condition of the market, the estimate, as inserted in the budget, means only a falling off in receipts of 1,602,500 francs.

AMERICAN INTEREST IN THE CONGO.

ALTHOUGH much interest was manifested in the United States in the formation of La Société Internationale Forestière et Minière du Congo, three years ago, on account of the participation of American capitalists in what promised to be an unusually important concession in the Congo state, there has been scarcely a mention of the enterprise in the American press since. This does not indicate, however, that the work of developing this concession, on which the time limit is sixty years, has been overlooked by the interests involved. The lands embraced in the concession are in the remote Katanga territory, and the organization of the work proposed by the *concessionaires* must naturally be slow, measured by business conditions in more civilized countries. The object of the company is to develop mineral and forest resources, the latter including india-rubber, besides which the company expect to plant rubber extensively. A recent number of *La Tribune Congolaise* (Antwerp) contains this report from Lac Leopold II:

"In the interest of the Société Internationale Forestière et Minière du Congo, M. Boulard, chief of this division, accompanied by his assistant, M. Bricusse, together with a new agent, M. Ledoux, who has recently arrived here, have ascended the Olongolo river to the place where it empties into the lake, to establish a new plantation station there, some hundreds of meters above the State station, Bongo. This new station will bear the name of Olongo, and will be under the control of M. Ledoux, agricultural engineer, who before rejoining our Nioki Division, had been sent off on a trip into the Mayumbe region to study the conditions there."

RUBBER PROFITS ON THE KASAI.

THE trading profits for 1908 of the Compagnie du Kasai—the rubber monopoly in the Kasai region of the Belgium Congo—though showing an important improvement over 1907, fell considerably short of the results for some preceding years. The gross return for 1908 was 8,125,674.73 francs [=$1,568,255.22]. The net profit, after providing for the cost of planting rubber as required by law, interest on bonds, etc., was 4,337,428.70 francs [=$837,123.74].

After paying 6 per cent. on the capital shares, directors' fees, agents' commissions, and adding to the reserves, there remained for the holders of the beneficiary shares (common stock) 3,216,000 francs [=$620,688], or 800 francs per share.

The capital of the company is in 4,020 shares of 250 francs each, totaling 1,005,000 francs [=$193,965], and an equal number of beneficiary shares "without designation of value." It is the later which participate in the large profits above referred to. One-half the beneficiary shares are held by the 14 companies participating in the Kasai syndicate, one-half by the Congo State. If the beneficiary shares be given the same par value as the capital stock (250 francs), as is the custom in issuing "common stock" in America, the Kasai dividend of 800 francs per share would work out at 312½ per cent. for the year. Last year the distribution was only 400 francs per share.

A recent Brussels bourse quotation for these shares "without designation of value" was 13,675 francs [=$2,639.27].

The net profits of the Kasai syndicate since the beginning, derived chiefly from its rubber trading, have been:

In 1902	1,210,706.23 francs	[=$233,666.26]
In 1903	3,497,393.01 francs	[= 677,996.85]
In 1904	5,334,797.06 francs	[=1,029,615.82]
In 1905	7,543,084.98 francs	[=1,455,885.40]
In 1906	8,033,657.22 francs	[=1,550,495.85]
In 1907	2,018,979.93 francs	[= 389,663.13]
In 1908	4,337,428.70 francs	[= 837,123.74]

The following statements appear in the latest annual report of the Kasai company:

"The importance of our harvests has virtually not varied at all, having been about 1,427 tons in 1907, while in 1908 it was 1,410 tons.

"We have again extended our field of operations toward the south and southwest. The different centers of population with which we come into contact are, for the most part, peaceful. All branches of our African service are working to our satisfaction. Our flotilla has been reorganized, and two new units have been added to it.

"Our producing area in the Lukombe district is continually being increased, and the funds for our replantings are regularly provided. Our Dima plantation is successfully carrying on its breeding experiments and its work with the growing plant.

"In a word, the situation that we have brought about in Africa after seven years of persevering work is very satisfactory. The taking over of the Congo by Belgium has only made it stronger.

"The greater part of the company's agents under bail up to the present time have been acquitted or sentenced to light punishment. They are better, in general, than the reputation too often attaching to them would lead one to believe, and their devotion and spirit of discipline are rather deserving of praise."

A SUGGESTION RE "LANDOLPHIA."

TO THE EDITOR OF THE INDIA RUBBER WORLD: The *Landolphia* rubber species are found everywhere in tropical and subtropical Africa; in some places the vines are not above 1 inch in diameter, while in other places they are found up to about 12 inches. In some regions they grow sparsely, and in a few parts they are a forest. As they do not grow straight, however, their tapping is more difficult than tree rubber, and consequently the collection of *Landolphia* rubber is comparatively expensive.

Many remedies have been suggested, one of which is that the *Landolphia* vines should be made into an annual or biennial crop, the same as the grape vine, and cut down a short distance from the ground; they would then sprout up again and be ready for re-cutting in a year or two. The whole of the cut plant would be carried to a central station, the larger pieces barked and this bark, together with the smaller branches and leaves, put through a masticating machine and the whole of the latex extracted instead of less than one-fourth by the tapping methods. *Landolphia* would thus become the most profitable of rubber plants.

Some attempts have been made in this direction by means of rollers, tube mills and other machines, with varying amounts of success. Some people only extract part of the rubber contents, others heat and spoil the rubber, and very few can be termed a commercial success. If a really good machine were provided there would be a large sale for them and the inventor would be well paid for his work.

This method would greatly increase the quantity available of this valuable rubber, because, instead of a man tapping a pound or two of rubber per day, he would be able to cut down enough vines to produce many hundred times that amount. The cost of collection would be very low, and such rubber could be sold at much lower prices than those at present ruling and yet realize handsome profits.

We have no doubt that many of your readers, like ourselves, would be very pleased to get into communication with inventors and manufacturers in this direction, and the discussion of this subject in your columns would doubtless be not only interesting but beneficial.

THE COSMO CONTRACTING SYNDICATE, LIMITED,
S. GOLDREICH, Director.

LONDON, November 3, 1909.

GOOD RUBBER FROM UGANDA.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In your issue of October 1 (page 28) I observe you make some allusion to our *Funtumia elastica* rubber. It will interest you to know that at the London sales held on the 19th inst., some of our rubber fetched 9*s* 4¼*d*. [=$2.27½] per pound. This was the third highest price in the market, and we hope before long to so improve the Mabira rubber that we shall easily top the best plantation Pará. This information may be of interest to the readers of your valuable journal, which we—in common with other planters—read with the greatest benefit from month to month. Yours faithfully,

MABIRA FOREST (UGANDA) RUBBER CO., LIMITED.
JOHN W. JOHNSTON, Managing Director.

London, October 21, 1909.

* * *

AT the second annual meeting of the Mabiri Forest company it was stated that the production of rubber had gone up from about 10,000 pounds in 1907 to 35,137 pounds in 1908, while the output for the first six months of 1909 was 26,000 pounds. Besides tapping mature trees a considerable amount of planting has been done, the number to May 31, 1909, being 276,634 *Funtumia elastica* and 3,471 *Hevea Brasiliensis*, in addition to coffee, cocoa, and sisal. At the latest report arrangements were being made to put out 150,000 seeds of *Hevea*.

* * *

AN interesting series of letters of travel in British East Africa is being contributed to an American newspaper syndicate by Mr. Edgar Beecher Bronson, an accomplished writer as well as a traveler of experience. A recent number, entitled "Rubbering in Africa," had to do with the territory controlled by the Mabiri Forest (Uganda) Rubber Co. The region is just north of Victoria Nyanza (lake Victoria), which great body of water is reached by the railway from Mombasa, recently traversed by Mr. Theodore Roosevelt on his hunting expedition. Mr. Bronson's article is unusually informing.

The News of Rubber Planting.

RESULTS OF THE FEDERATED MALAY STATES COMPANY.

DESPITE all that has been reported in relation to the yield of planted *Hevea* rubber, there is as yet no standard for comparison of general utility. On an important productive estate trees will be tapped of varying ages, some regularly all year and some for only a single series of a fortnight or a month. Likewise different methods practised on trees of a given age do not always give the same results, and furthermore there must be a difference in the output of rubber in the hands of experienced workers and those without experience. A consequence is that even in the most informing company reports it is not always made clear how much rubber comes from trees of any given age, tapped by this or that system.

It is interesting, however, to note that in the report of a certain well managed rubber plantation in the Malay peninsula, which during the past year yielded 126,512 pounds, or 1.98 pounds per tree, the average for the older trees was 5½ pounds. These trees are of different ages, up to twelve years. Certain young trees tapped during only six months, averaged 1 pound each, and trees still younger tapped during four months averaged 8 ounces each. The company referred to is the Federated Malay States Rubber Co., Limited, owned in and controlled from Antwerp, under the able management in Selangor of Mr. E. B. Skinner. It is this company whose product appears at the monthly inscriptions at Antwerp, just as the British owned plantations send their produce chiefly to London.

With regard to yield, it may be mentioned that this company's annual report two years ago showed an average of over 2.5 pounds for all the trees tapped, and the lower average this year is due to the coming into bearing of so many young trees. The production, however, of 5½ pounds from 17,148 trees must be regarded as a very notable fact.

The report of the Federated Malay States company says: "The cost of tapping for labor only was 18.58 cents (silver) per pound, and the cost, including knives, cups, collecting cans, etc., was 20.72 cents per pound. Considering the very large proportion of young trees tapped, the cost may be considered satisfactory." It is clear that the average cost of production is not wholly satisfactory. It would be most desirable to have some such company isolate a certain number of mature trees and inaugurate some system of cost keeping for this section alone, with a view of arriving at the actual expense involved. It is clear that the tapping of trees which yield only 1 pound must lead to a largely pound cost than in the case of trees yielding five times as much rubber.

The salient features of the company's reports during four years past may be summarized as follows:

	1906.	1907.	1908.	1909.
Yield (pounds)	13,322	32,175	66,725	126,512
Net profits (francs)	74,003.16	173,980.35	180,061.15	645,341.22
Dividend	5%	8%	8.5%	24%

It is proper to note that the 24 per cent. dividend did not absorb all the profits of the company for the year. The legal reserve, which this year amounted to 32,000 francs, was provided for; as well as a special reserve of 50,000 francs; 77,000 francs to the directors (who would have had nothing in a lean year); and a carryover to the new year of 10,000 francs more than in 1908.

The manager of the Federated company has done a considerable business in the treatment at his factory of considerable rubber from neighboring estates. In addition to his own output of 126,512 pounds, mention is made of 102,671 pounds treated for other planters, which doubtless added materially to the profits of the company. The number of coolies on the estate is 854. During the year, the labor force not being sufficient, some Chinese women were employed in addition, and as much light work is involved in rubber production, it is possible that the employment of this hitherto unthought of class may extend to other plantations.

With regard to the tapping methods employed by Mr. Skinner, his report says: "At the beginning of the year, the 17,148 trees were laid out with a double herring bone, one-half of the tree with cuts at 12 inches apart; 6 inches of each cut was reserved for the year 1908-09, and the remaining 6 inches for the year 1909-10. It was expected that this surface of six inches would be exhausted in six months—*i. e.*, an average of fifteen cuts to the inch. This, however, was not the case, as the average worked out at nearer 22 cuts to the inch, therefore the six inches of bark of these trees took much longer to finish. This mainly accounted for the very large increase in the crop over the estimated amount. The standard of 22 cuts to one inch should easily be maintained in the future."

Another point which remains for comment is that the officers and directors of the Federated Malay States Rubber Co., Limited, embrace most of the leaders in the crude rubber trade at Antwerp—men whose fortunes have been made largely from handling the native Congo rubber—and their present interest in Malay plantations can hardly be interpreted otherwise than as an indication of an expected diminution of the Congo rubber output.

EXPANSION OF THE MALACCA RUBBER PLANTATIONS.

AT the third annual meeting of Malacca Rubber Plantations, Limited (London, October 26), the issue was authorized of 6 per cent. debenture bonds to the amount of £500,000 [=$2,432,500], the proceeds to be employed (1) in repaying loans involved in recent purchases of adjoining properties which have brought the company's acreage of rubber up to 15,000, and (2) in providing about £240,000 working capacity, which it is expected will be required soon in dealing with the great number of trees now reaching a tappable age. The latest census of planted *Hevea* trees is as follows:

7 years and over	170,000
6 years and over	101,000
5 years and over	114,000
4 years and over	365,000
3 years and over	600,000
2 years and over	750,000
Under 2 years	650,000
Total	2,750,000

While the company have been tapping for three years, the total product so far has not been large, but it is believed that about 225,000 trees are now ready to be tapped, which, at the same rate as realized hitherto, will greatly increase the output. The company have paid, for the three years, the 7½ cumulative dividend on the preference shares—115,000 at £1 each. Their white crepe rubber has sold at the high London prices for this grade, but now that a preference is being shown for smoked sheet, the management is preparing to adopt the smoking process. The Malacca company's original estates were founded by a Chinese company, and some interest attached to the purchase, owing to the fact that there were Americans among the vendors.

RUBBER PLANTATION YIELDS.

SPACE cannot be afforded for all the statistics of production of the many rubber producing plantations in the Far East, the returns from which are cabled regularly to the outside world, in detail comparable with that noticeable in reporting railway earnings, for example, in the United States. It may be of interest, however, now and then, to glance at returns taken at random

from the latest despatches, as has been done in the table which follows. The point to be made is that a steady increase in production is shown, and that at a rate which insures the permanent importance of Ceylon and the Federated Malay states in the production of rubber. *The figures indicate weights in pounds.* The word "Limited" is omitted from the legal title of each company named:

	1908.	1909.
Golconda Malay Rubber Co.:		
October	3,667	10,675
Ten months to October 31	44,263	69,348
Federated (Selangor) Rubber Co.:		
October	4,961	8,026
Seven months to October 31	30,043	52,115
Anglo-Malay Rubber Co.:		
October	32,521	53,394
Ten months to October 31	280,524	417,178
Harpenden Selangor Rubber Co.:		
October	*	2,212
Ten months to October 31		15,738
London Asiatic Rubber and Produce Co.:		
October	4,453	8,851
Ten months to October 31	24,860	56,550
Valambrosa Rubber Co.:		
October	26,245	34,000
Seven months to October 31	140,549	201,902
Pataling Rubber Estates Syndicate:		
October		15,636
Ten months to October 31	55,937	115,630
Federated Malay States Rubber Co.:		
October		25,500
Five months to October 31		108,690
Kuala Lumpor Rubber Co.:		
October		39,500
Four months to October 31		136,100
Mabiri Forest (Uganda) Rubber Co.:		
October	5,615	14,400
Ten months to October 31	23,243	79,145
Domansara (Selangor) Rubber Co.:		
October		19,515
Ten months to October 31	99,515	161,613
Malacca Rubber Plantations:		
October		24,000
Perak Rubber Plantations:		
October	6,613	10,500
Seven months to October 31	29,092	65,261
Sumatra Para Rubber Plantations:		
October	4,704	10,640
Four months to October 31	21,842	38,872
Bukit Rajah Rubber Co.:		
October		22,259
Seven months to October 31	95,129	142,930
Consolidated Malay Rubber Estates:		
October	10,591	21,030
Ten months to October 31	81,505	162,775
Highlands and Lowlands Para Rubber Co.:		
October	18,131	30,224
Ten months to October 31	163,022	264,228
Linggi Plantations:		
October	24,000	48,000
Ten months to October 31		421,500

SOME CEYLON RESULTS.

THE figures below relate to the first nine months of 1909, compared with the same period of last year. The rubber sales were at Colombo. The prices stated are in rupees, R1 being slightly less than 32½ American cents.

Ceylon Planters' Rubber Syndicate, Limited.—Sold 57,124 pounds at R 3.43 average, against 28,589 pounds at R 2.38 last year.

Clyde Tea Estates Co., Limited.—Sold 10,322 pounds at R 3.61 average, against 2,768 pounds at R 2.58 last year.

Yataderia Tea Co. of Ceylon, Limited.—Sold 9,128 pounds at R 3.67 against 4,216 pounds at R 2.56 last year.

Udabage Tea and Rubber Co., Limited.—Sold 948 pounds at R 3.81 average; none last year.

Ribu Rubber Co., Limited.—Sold 22,410 pounds at R 3.60 average, net, against 8,859 pounds at R 2.42 last year.

KUALA LUMPUR RESULTS.

THE Kuala Lumpur Rubber Co., Limited, a Malay States company, during the year ended June 30, 1909, obtained 196,121 pounds of rubber from 67,165 trees, or 2.92 pounds per tree. They have 36,397 trees, aged 7 years and older; the other trees are younger. It is planned this year to tap 148,600 trees. Comparative results:

	1906-07	1907-08.	1908-09.
Yield (pounds)	52,998	79,274	196,121
Average price	3s. 2½d.	3s. 4d.	6s. 3¼d.
Net profits	£7,612 4 2	£5,117 9 9	£43,033
Dividend	3%	3%	20%

During the first four months of the new year, to October 31, the rubber harvest was 136,100 pounds.

PATRIOTIC RUBBER PLANTATION EMPLOYES.

THE extent of the properties of La Zacualpa Rubber Plantation Co., in Mexico, and the allied enterprises is indicated by a poster which reaches THE INDIA RUBBER WORLD, issued in connection with the celebration of the Mexican independence day (September 15) by "La Junta Patriotica," formed of the plantation forces. The celebration really lasted two days, and the program indicates a wide range of musical and literary entertainment, interspersed with patriotic addresses, showing a degree of intelligence among the participants which would do credit to any rural community in any country. A report from the plantation states that some 3,000 persons attended the exercises. While the "Junta" is organized among the employés, with officials chosen from their number, the name of the superintendent of La Zacualpa, Mr. W. S. Fisher, is mentioned prominently on the poster in connection with the celebration exercises.

MEXICAN RUBBER CULTURE CO.

THIS company, with headquarters at Portland, Oregon, announce a series of measurements of planted *Costilloa* trees on their plantation in Chiapao, Mexico, covering 25 each of the ages of 1, 2, 3, 4, and 5 years, the whole showing a very encouraging rate of growth. Their acreage—all planted about 200 trees to the acre—is divided about as follows:

5 year old trees	about 400 acres
4 year old trees	" 200 acres
3 year old trees	" 250 acres
2 year old trees	" 450 acres
1 year old tree	" 200 acres
Total	about 1,500 acres

The company advise THE INDIA RUBBER WORLD: "We expect to commence our preliminary tapping next spring, and will push this work just as rapidly as is consistent with good business judgment."

PLANTING "JEQUIE" RUBBER.

THE Jequié Rubber Syndicate, Limited, registered in London in August, 1908, with £40,000 [= $194,660] capital, are reported to have on their property in the state of Bahia, Brazil, some 420,000 planted trees of the highly approved *Manihot dichotoma* species, with an equal or larger number of native trees growing on land which it is proposed to clear and form into plantations. Furthermore, it is proposed to plant extensively. The expectation is to derive about ¼ pound of rubber per tree yearly, but in view of the small size of the trees the acreage yield is expected to be very large. Tapping was to have commenced during September, and washing and crepeing machines have been forwarded to the estate. The board is headed by L. T. Boustead, chairman of an important Malay States rubber planting company.

RUBBER PLANTATION TOPICS.

THE Planters' Association of Malaya have made representations to the government regarding the desirability of licensing and controlling dealers in india-rubber and gutta-percha. The argument in favor of this is that already much loss has been sustained by planters through thefts of rubber from drying rooms and even of latex from trees.

Arrangements have been made in London for sending a rubber research chemist to the Federated Malay States. to start in January and remain three years. A similar scheme is on the tapis for Ceylon.

The growing connection between the rubber producing and rubber consuming interests is further indicated by a report of the latest meeting of the Beaufort Borneo Rubber Co., Limited, in London, which was presided over by Colonel Richard K. Birley, C. B., who is the head of the famous rubber manufacturing company, Charles Macintosh & Co., Limited, of Manchester. The company have 875 acres planted up to date, and purpose tapping their older trees within six months.

At Dinner with President Colt.

To meet
The Directors of the United States Rubber Company

Mr. Samuel Pomeroy Colt
requests the pleasure of

.....

company at dinner
on Tuesday evening, November the twenty-third
at half after seven o'clock
at the Metropolitan Club

R. s. v. p.
Metropolitan Club

TO very many readers the feature of chief interest in connection with the dinner given at the Metropolitan Club, New York, on the evening of November 23, to the directors of the United States Rubber Co., by Colonel Samuel P. Colt, president of that corporation, will be a review of the list of guests. Perhaps at no other dinner given in New York has the prominence of those in attendance, from a business or financial or professional standpoint, averaged higher—if the term may be used in such a connection—than in the case of the half a hundred or more who sat at Colonel Colt's table.

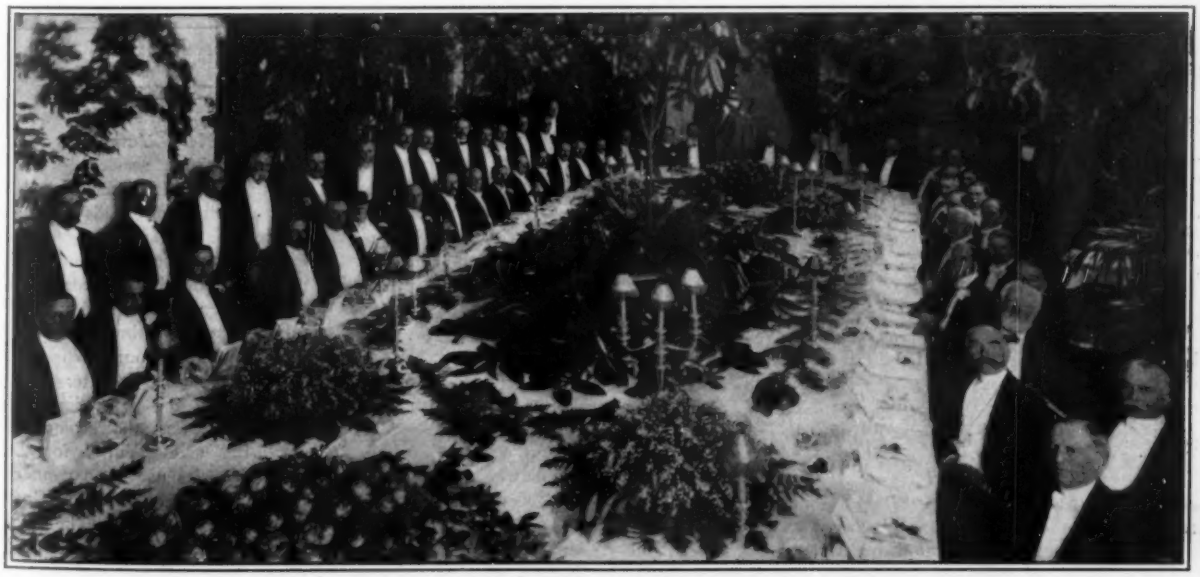
The directors of the United States Rubber Co. themselves form a very substantial body of citizens, some devoting their energies wholly to the affairs of this important corporation, while the others are interested in large business affairs on the outside. There have been larger gatherings of business men in the city, and, of course, dinners of more ultimate consequence. The point here, however, is that the dinner here reported was not for the promotion of any business enterprise, not for any political purpose, not for the entertainment of distinguished visitors from abroad. It was only an opportunity made by the president of a rubber manufacturing company to meet his co-directors in a less formal way than around the big table in the board room, and incidentally to enjoy the company of a few friends of his and their own.

It is high tribute to any man that he is able to surround himself with such a body of guests under such circumstances; it is a tribute to the company of which he is the head that its directors number among their friends so representative a body of men of affairs.

LIST OF GUESTS PRESENT.

**Denotes Directors of the Company.*

Judge WILLIAM H. MOORE,*
GEORGE F. BAKER, chairman of the board, First National Bank of New York;
FRANK A. VANDERLIP, president The National City Bank;
FRANCIS LYNDE STETSON,* general counsel United States Rubber Co.;
GEORGE W. PERKINS, of J. P. Morgan & Co.;
Rev. Dr. ERNEST M. STIRES, rector St. Thomas' Church;
Judge ELBERT H. GARY, chairman United States Steel Corporation;
FRANCIS L. HINE,* president First National Bank of New York;
Commodore ELBRIDGE T. GERRY, counsellor at law;
WILLIAM H. PORTER, president Chemical National Bank;
JAMES B. FORD,* vice-president United States Rubber Co.;
ANTHONY N. BRADY;*
ROBERT WINSOR, of Kidder, Peabody & Co., Boston;
Hon. NELSON W. ALDRICH, United States senator from Rhode Island;
THOMAS H. SHEVLIN, lumber merchant, Minneapolis;



AT DINNER WITH PRESIDENT COLT AT THE METROPOLITAN CLUB.
[Colonel Colt in the center, at the head of the table.]

Hon. PAUL MORTON, president Equitable Life Assurance Society;
LESTER LELAND,* second vice-president United States Rubber Co.;
GORDON ABBOTT, president Old Colony Trust Co., Boston;
Commodore E. C. BENEDICT;*
D. LORNE MCGIBBON, president Canadian Consolidated Rubber Co., Limited;
EDWARD R. RICE;*
DANIEL G. WING, president First National Bank, Boston;
THEODORE N. VAIL, president American Telephone and Telegraph Co.;
WILLIAM H. TRUESDALE,* president Delaware, Lackawanna and Western Railroad Co.;
JAMES N. WALLACE, president Central Trust Co.;
ALFRED L. RIPLEY, president State National Bank, Boston;
ALBERT H. WIGGIN, vice-president Chase National Bank;
RICHARD V. LINDABURY, New Jersey counsel United States Rubber Co.;
JOHN J. WATSON, JR.,* treasurer United States Rubber Co.;
JULIEN T. DAVIES, counsellor at law, New York;
ARTHUR L. KELLEY;*
J. HOWARD FORD;*
Hon. CHARLES H. ALLEN, vice-president Morton Trust Co.;
Hon. LEBARON B. COLT, United States circuit judge;
HOMER E. SAWYER,* general manager United States Rubber Co.;
STEPHEN O. EDWARDS, counsellor at law, Providence;
Hon. EDWIN ALDRICH, United States district judge, New Hampshire;
HENRY L. HOTCHKISS;*
WALTER F. ANGELL, counsellor at law, Providence;
WALTER S. BALLOU;*
CALVIN S. MAY, M.D., New York;
HOWLAND DAVIS, of Blake Brothers & Co., bankers;
NATHANIEL MYERS, counsellor at law, New York;
SAMUEL NORRIS, secretary United States Rubber Co.;
PHILIP STOCKTON, president City Trust Co., Boston;
FRANK S. HASTINGS;*
Colonel HARRY E. CONVERSE;*
GATES W. MCGARRAH, president Mechanics National Bank;
ERNEST HOPKINSON, general counsel Rubber Goods Manufacturing Co.;
EDGAR B. DAVIS, vice-president General Rubber Co.;
JOHN D. CARBERRY, assistant secretary United States Rubber Co.;
CHARLES MACVEAGH, counsellor at law, New York;
RUSSELL G. COLT, of H. L. Horton & Co., bankers, New York;
COLONEL SAMUEL P. COLT,* president United States Rubber Co.

A LIST OF THE TOASTS.

"Brotherhood and Trade".....The Rev. Dr. Stires
"Corporations and Taxation".....Mr. Julien T. Davies
"Timber and Lumber".....Mr. Thomas H. Shevlin
"Industrial Combination".....Mr. R. V. Lindabury
"Insurance and Banking".....Mr. Paul Morton
"Tariff and Currency".....Senator N. W. Aldrich
"Law and Business".....Mr. Francis L. Stetson
"Rubber and Canada".....Mr. D. Lorne McGibbon
"Judiciary and Commerce".....Judge LeBaron B. Colt

FLORAL DECORATIONS.

The floral decorations were elaborate. The center of the large table was ornamented by a large rubber plant, around which was a circle of rubber leaves and branches, tastefully arranged and sprayed on the cloth.

On a center line and to each end of the table was placed a large centerpiece of American Beauty roses, with asparagus vines.

Four smaller baskets of lilies of the valley, with delicate greens, was placed respectively between—but to each side of the two ends and the middle centerpiece.

Choice hot house fruit was also placed on the table.

The walls of the room were festooned with Southern smilax, and large rubber plants were placed at the windows and in suitable corners.

DINNER SOUVENIRS.

The dinner souvenirs, furnished by Tiffany & Co., were in exquisite taste. They consisted of a hand painted menu for each guest, bearing his name in gold scroll work, above which was a single leaf of a rubber tree in green. In the upper right hand corner was the Colt coat-of-arms in gold. The menu was a four-page folder of heavy bond paper bound with a knotted golden cord. On the second leaf appeared the menu, on the third page the list of toasts, and on the fourth the musical program, which was furnished by the Van Baar String Sextette. The menu itself reposed in a green beaver cloth lawyer's bag, tied with green ribbons, through which, interwoven with a narrow white silken ribbon, was caught the personal card of the giver of the dinner. As a further souvenir, a hard rubber fountain pen and filler nestled in a neat white box, each pen having around it a broad band of gold, upon which was engraved the initials of the guest and the date. As a suggestion of the industry to which Colonel Colt has devoted so large a part of his life was another box in which were a pair of miniature rubber boots and rubber shoes.

The ices were served in small silk covered boxes in green with "Metropolitan Club" on gold letters on one side, and on the opposite side the date—November 23, 1909. The box itself was surmounted by a sphere of white rubber, around which was a ribbon in red, white, and blue. The upper part of the sphere bore the name in green "United States Rubber Co."

The musical program rendered was in keeping with the general charm of the entertainment.

MENU

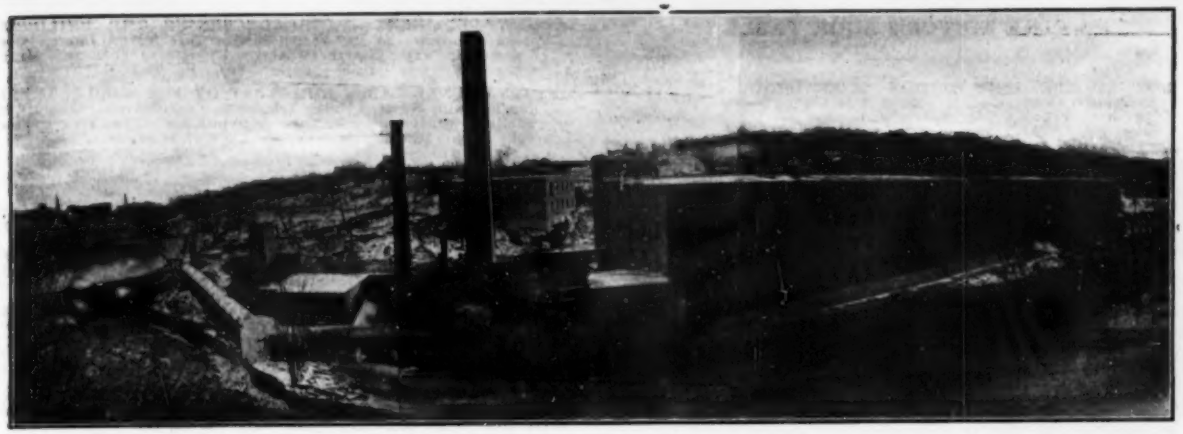
Seaconnet Oysters
Oxtail à la Française
Celery Olives Radishes Almonds
Terrapin
Squab Chicken Metropolitan
String Beans Potatoes rissolée
Canvasback Duck Hominy and Samp
Salad à la Tosca
Camembert and Gorgonzola Cheese
Fruit Fancy Ices Cakes
Coffee

Royalty Amontillado Sherry
Veuve Clicquot "dry" 1899
Liqueur
Perrier Water

THE ELECTRICAL INTEREST.

THE longest submarine cable in New York was laid lately for replacing the old telephone service between "Broad" exchange of the New York Telephone Co. and the United States immigration station on Ellis Island. The new cable was purchased by the government, and is public property. It is described as being 9,000 feet long, and 2½ inches in diameter; weighs 86,000 pounds, and cost $17,300. It is made of jute, tar, rubber compound and ground glass, and is designed to stand the hardest submarine wear. The binding is two layers of ¼ inch wire, wound crosswise to one another, and between them is a coating of jute.

One of the largest orders ever placed for paper insulated submarine telephone cable, it is said, was that completed recently by the Western Electric Co. (New York) for the Pacific Telephone and Telegraph Co. Its use is to connect San Francisco with Oakland, California, by way of Goat Island, beneath the waters of San Francisco bay. The total length of cable is 16,300 feet [=3.087 miles]; diameter 2⅜ inches, with 69 pairs of telephone wire—26 pairs of No. 13 B. & S. and 43 pairs of No. 19 B. & S. The weight was approximately 101½ tons.



Mill Pond and Pen Stocks. Power Plant. Storehouse in Background. Main Factory, Miner Rubber Co. Factory Walpole Rubber Co.

THE NEW FACTORIES AT GRANBY.

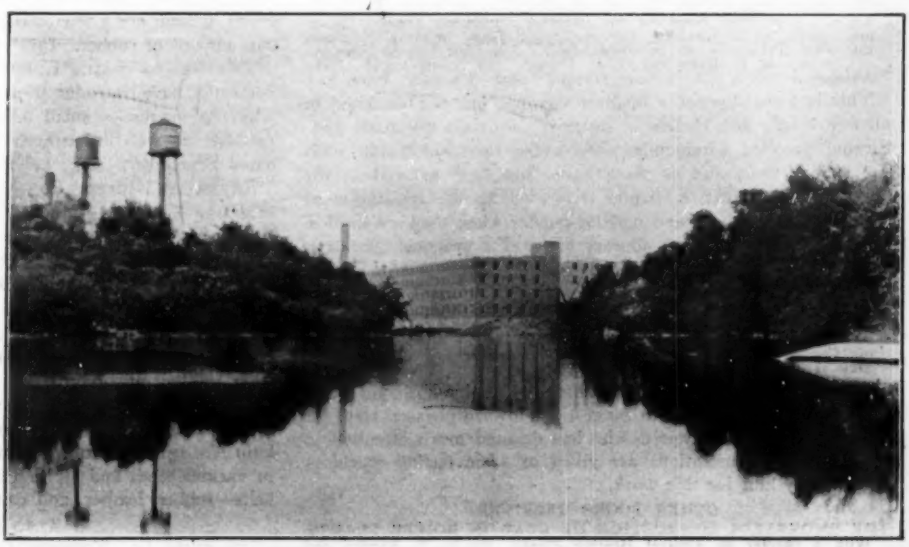
ABOUT fifty miles from Montreal, province of Quebec, in the shadow of Mt. Yamaska, and divided in twain by the rapid Yamaska river, lies the thrifty little city of Granby. Of this city for more than twenty years Mr. S. H. C. Miner has been mayor. An owner in most of its various industrial enterprises, possessed of large land holdings, and deeply interested in every phase, educational, religious or industrial, that the life of his native town affords, Mr. Miner has governed wisely and well. His latest enterprise—the factories of the Miner Rubber Co., and the Walpole Rubber Works—while of surpassing interest to his townsfolk, are also of great interest to the rubber trade at large. Owning the land along the river front for more than a half mile through the middle of the town, it was natural that he should seek to drive the new mills by water power. He therefore put in two cement dams and a huge pen-stock, 1,000 feet long, to lead the water to the turbines, which, under 32 feet head, will deliver 600 H.P. of water power. In addition to this, the water power of the electric light plant, 200 H.P., which is available except at night. Furthermore, a 650 H.P. Goldie-Corliss engine will give steam power for the factories. The steam plant itself consists of three boilers, whose total power is 700 H.P.

The power plant is so arranged that the electrically equipped machinery in all parts of the works may be run either by the water wheels, the steam engine, or by both in unison. Washers, mixing mills, calanders—indeed, all machines are fitted with motors so that the pressure of a button starts or stops any or all of them. One of the most interesting mechanical appliances in the power plant is a new water wheel governor, as sensitive and effective as the best steam engine governor. It is something that all users of water power have wished for, but until recently considered almost a mechanical impossibility.

The factory buildings proper run for about 500 feet along the bank of the river and contain roughly 200,000 square feet of floor space. The main building, a fine four story brick edifice with square towers at either end, is designed for the manufacture of rubber footwear, and will have a capacity of 20,000 pairs of boots and shoes for a working day of ten hours. A similar building, but not as long, is the four story brick edifice with a single tower, which will house the specialties and mechanical rubber goods manufactured by the Walpole company. On a line with these buildings, and still further down stream, ground is being broken for a reclaiming plant and a last factory.

The factories are equipped with the Rockwood sprinkler in addition to the great fire pump, which has a capacity of 1,000 gallons a minute. The arrangement of the buildings is such that there will be absolutely no carting.

It is rarely that a manufacturer has either the knowledge or the opportunity to plan factories so substantial in construction, so ideal in arrangement, and with such economies in operation. Built of brick from his own yards, timber from the product of his great lumber mills in Vancouver, erected from architectural plans of his own, Mr. Miner has certainly created a most practical and permanent monument for himself.



MINER AND WALPOLE FACTORIES, LOOKING UPSTREAM.

THE EDITOR'S BOOK TABLE.

RAPPORT SUR UNE MISSION SCIENTIFIQUE EN AFRIQUE Occidentale. Recherches de 1906-07 à la Côte d'Ivoirie. Par M. Aug. Chevalier. (Extract from *Nouvelles Archives des Missions Scientifiques*, Paris, Vol. XVIII, 1909.)

THIS paper has appended an interesting map of the forest regions of the Ivory Coast, indicating articularly the distribution of rubber species. There are many different *lianes* (creepers), in addition to the *Funtumia* trees.

ELECTRICITY EXPLAINED. BY J. CALVIN S. TOMPKINS. NEW York: Cochrane Publishing Co. 1909. [Cloth. 12mo. Pp. IV + 64. Price, 75 cents.]

THIS is a book for popular reading, and therefore expressed in simple language, which will prove helpful to persons desiring elementary information as to the different kinds of electrical currents and their control and their application to the wants of man.

A MANUAL OF STEAM ENGINEERING, COMPRISING INSTRUCtions, Suggestions and Illustrations for Progressive Steam Engineers Concerning the Application to Modern Daily Practice of the Approved Theory of Steam Engineering. By W. H. Wakeman. - - - New York: New York Belting and Packing Co., Limited. [1909.] [Cloth. 32mo. Pp. 409.]

THE author of this handy book has written extensively for steam engineers, and is an authority in his field. The present work has been prepared at the suggestion of a leading firm of rubber manufacturers, for distribution among their customers. It cannot fail to be of interest, not only to engineers, as a book of reference, but also to those who have to do with the administration of industrial enterprises which make use of steam power.

HENDRICKS' COMMERCIAL REGISTER OF THE UNITED STATES, for Buyers and Sellers. Especially Devoted to the Interests of the Architectural, Mechanical, Engineering, Contracting, Electrical, Railroad, Iron, Steel, Hardware, Mining, Mill, Quarrying, Exporting, and Kindred Industries - - - New York: Samuel E. Hendricks Co., No. 74 Lafayette street. 1909. [Cloth. Large 8vo. Pp. LXXVII + 1,220. Price, $10.]

THIS is the eighteenth annual edition of a work which has proved its usefulness to a very great number of business men in a wide field. It embraces the names and addresses of over 350,000 manufacturing firms and individuals, under 35,774 business classifications, the mere listing of which, in the index, requires 77 four-column pages in small type. While not offered as a complete directory of any branch of industry, its lists under each general heading are sufficiently full to make the work one of value for reference, to which are to be added the advantage of its being accurate and brought up to date.

DISEASES OF A GASOLINE AUTOMOBILE AND HOW TO CURE Them. A practical Book for the Gasoline Automobile Owner, Operator, Repair Man, Intending Purchaser, and Those Wishing to Learn the First Principles of an Automobile. Also for Launch Owners. - - - By A. L. Dyke and G. P. Dorris. [St. Louis: A. L. Dyke Automobile Supply Co. 1903.] [Cloth. 12mo. Pp. 201. Price, $1.]

This is avowedly not a theoretical work, but one designed to answer briefly but clearly a series of practical questions concerning gasoline automobiles. As every such automobile calls for rubber tires, and as these have "diseases" as well as the other parts of a car, a chapter is devoted to the application of tires, caring for them, and making repairs when they are needed. This section of the work appears to be of a practical character, from which it may be assumed that the same is true of the remaining chapters.

THE TENSILE PROPERTIES OF INDIA-RUBBER. BY PHILIP Schidrowitz, PH.D., F.C.S., Member of British section International Testing Committee. [Reprinted from *The India-Rubber Journal*, March 22-May 31, 1909.] [Paper. 4to. Pp. 15.]

THIS paper is devoted to the desirability of standardizing india-rubber goods, together with suggestions toward physical tests for this purpose, by a physicist who has devoted much attention to this subject. Illustrations are given of some testing machines designed by him for this work.

OTHER BOOKS RECEIVED.

THE SMOKELESS COMBUSTION OF COAL IN BOILER PLANTS. With a chapter on Central Heating Plants. By D. T. Randall and N. W. Weeks. (United States Geological Survey—Bulletin 373.) Washington: Government Printing Office. 1909. [Paper. 8vo. Pp. 188.]

A FEW PERTINENT FACTS CONCERNING THE PHILIPPINE Forests and Needs of the Forest Service That Should Interest Every Filipino. By Major George P. Ahern, Director of Forestry. Manila: Bureau of Printing. 1908. [Paper. 8vo. Pp. 21.]

INTERNATIONAL CABLE DIRECTORY OF THE WORLD, IN CONjunction with Western Union Telegraphic Code System. Compiled and published by International Cable Directory Co. New York and London: 1909. [Cloth. 4to. Pp. 869. Price, $7.50]

IN CURRENT PERIODICALS.

CACAO et *Castilloa*. By H. Hamel Smith. = *Journal d'Agriculture Tropicale*, Paris. IX-97 (July 31, '09). Pp. 196-197.

La Saignée du *Funtumia* par Incisions Verticales. By O. Labroy. = *Journal d' Agriculture Tropicale*, Paris. IX-97 (July 31, '09). Pp. 197-200.

Organization Générale d'une Plantation d'*Hevea*. [In French Indo-China.] By G. Vernet, agricultural engineer. = *Journal d'Agriculture Tropicale*, Paris. IX-96 (June 30, '09). Pp. 161-164; IX-97 (July 31, '09). Pp. 201-204.

Exploitation et Culture des Lianes à Caoutchouc en Afrique Occidentale. By E. De Wildeman. = *Journal d'Agriculture Tropicale*, Paris. IX-96 (June 30, '09). Pp. 172-174.

Principales Clases Comerciales de Caucho y Plantas que las Producen. By Paul Beckman [Translated from *Aus der Natur.*] = *Boletin* der Ministerio de Fomento, Caracas. I (July, '09). Pp. 19-37.

The Modern Telephone Cable. By Frank B. Jewett. [Deals with paper insulation.] = *Proceedings* of the American Institute of Electrical Engineers, New York. XXVIII-7 (July, '09). Pp. 947-961.

Cinchona-und Kautschukkultur in Ceylon. By Charles Böringer. = *Der Tropenpflanzer, Berlin*. XIII-6 (June, '09). Pp. 209-274.

NEW TRADE PUBLICATIONS.

THE NEW YORK LEATHER BELTING Co. (New York), publish a pamphlet, "From Forest to Factory," devoted to the "Victor" brand of balata belting, which is illustrated with views of more than a score of factories where this belting is in use. [6″ x 9″. 63 pages.]

HOME RUBBER Co. (Trenton, New Jersey), issue a catalogue of Packings for all Purposes and Conditions. The numerous brands of packing made by this company which have become widely known in the trade are all illustrated and described in this book, besides which several pages are devoted to the company's production of hose, belting, mats and matting, valves, and various specialties. [4½″ x 7¾″. 122 pages.]

JOHN ROYLE & SONS (Paterson, New Jersey), issue their Catalogue No. 214, devoted to Tubing Machine Fixtures. It is illustrated with a number of cuts of parts and fixtures in their line. [4″ x 6″. 63 pages.]

THE WATSON MACHINE Co. (Paterson, New Jersey), send out a collection of leaflets, each describing and illustrating one of the machines of their production adapted to the insulated wire industry. [6″ x 9¼″. 62 leaves.]

FRED MEDART MANUFACTURING Co. (St. Louis), sends Catalogue G. of Gymnastic Apparatus, of which the company are large manufacturers. This cannot be classed as a catalogue of rubber goods, though not a few of the Medart specialties embrace a certain amount of rubber. [5½″ x 8¼″. 112 pages.]

THE BEACON FALLS RUBBER SHOE Co. (Beacon Falls, Connecticut) have introduced a new feature in their advertising which is unique—a small monthly periodical, *Rubber*, which is readable as well as attractive in looks. The initial number is dated September, 1909. [4″ x 4⅝″. 16 pages.]

ENTERPRISE RUBBER Co.—William E. Barker, president and treasurer (Boston)—issue "Our Salesman in Print, No. 6," covering the latest catalogue of Candee Rubbers, with some special remarks to dealers. [3⅝″ x 6½″. 76 pages.]

ELECTRIC HOSE AND RUBBER Co. (Wilmington, Delaware) issue a catalogue of designs, in colors, of their Interlocking Rubber Tiling. The pages of this attractive publication are trimmed in the shape of a section of tiling, which makes it somewhat unlike any other trade publication that has reached THE INDIA RUBBER WORLD. [4⅞″ x 4⅞″. 14 leaves.]

THE BRISTOL Co. (Waterbury, Connecticut) devote their Bulletin No. 13 to Bristol's Patent Steel Belt Lacing, which is made in various sizes and styles for all kinds of drive and conveyor belts—rubber, leather, and cotton. [8″ x 10½″. 8 pages.]

ALSO RECEIVED.

THE Bristol Co., Waterbury, Connecticut = Bulletin 111—Bristol Class II Recording Thermometers. 8 pages.

The Coile Bed Bath Co., Knoxville, Tennessee = The Coile Bed Bath. 16 pages.

THE GUAYULE CONSOLIDATION.

THE Intercontinental Rubber Co., capitalized at $40,000,000, and the Continental Rubber Co., of America, with $30,000,000 capital, were consolidated by a certificate of merger filed in the office of the secretary of state at Trenton, New Jersey, on November 1. The papers filed show that the Intercontinental company already owned 299,750 shares of the capital stock of the Continental company, valued at $29,975,000. The total outstanding stock of the Intercontinental company was $34,182,000, and of the Continental company $29,990,000. The merger papers state that it was deemed best for both corporations to consolidate.

The name of the new corporation is the Intercontinental Rubber Co. and the authorized capital stock is $40,000,000, divided into $10,000,000 preferred, bearing 7 per cent. cumulative dividends, and $30,000,000 common. The method of consolidation was that each share of the Continental stock not held by the Intercontinental company should be exchangeable, share for share, for the stock of the new Intercontinental company, all the stock of the former company held by the latter to be retired.

The directors of the new company are: Edward B. Aldrich, United States Senator Nelson B. Aldrich, of Rhode Island; Herman B. Baruch, Henry A. Bingham, Daniel Guggenheim, S. B. Guggenheim, Paul Morton, who was formerly secretary of the navy; Allan A. Ryan, and William Sproule. The address of all is given in the papers as No. 15 Exchange place, Jersey City, the New Jersey office of the corporation.

The Continental Rubber Co., of America, was the holding company for the Continental Rubber Co. and the Continental-Mexican Rubber Co., engaged in the exploitation of guayule rubber in Mexico. The interests involved in the consolidation also control the American Rubber Co.

THIS YEAR'S "NORTH BRITISH" TIRES.

TWO British shows of unfailing interest to the rubber tire trade occurred this year, as usual, in November, but too late to permit of their being reported in this issue of THE INDIA RUBBER WORLD. They were, of course, the International Motor Exhibition (this was the eighth year), organized by the Society of Motor Manufacturers and Traders, Limited, in connection with the Royal Automobile Club, under the patronage of the King, and held at Olympia, London, November 12-20. The other was the Stanley Show, held a week later, for the thirty-third successive year, at Royal Agricultural Hall.

At the Olympia Motor Exhibition the North British Rubber Co., Limited, showed a complete range of their well known "North British" clincher motor tires. There were four patterns: (1) the clincher plain ribbed tire; (2) the clincher vacuum grooved tire; (3) the clincher rubber studded tire; and (4) the clincher steel studded tire. These are all made by a new hydraulic molding process, by which the treads are molded and not cemented on in the usual way. The rubber of the "North British" tires is all white. It is stated, as likely to interest motorists, that the qualities insisted upon by the British admiralty for all mechanical goods are founded upon chemical ingredients similar to those used in "North British" tires.

In addition to tires the company exhibited some interesting accessories. Among these were a new valve grip and an improved security bolt. A deflation alarm valve shown, by blowing a whistle, indicates when a tire is punctured or is insufficiently inflated. By means of a new detachable rim exhibited by the company a tire can be detached, a new tube inserted, and the whole replaced within two minutes.

The "North British" clincher tires for cycles, exhibited at the Stanley Show, are in four types. The "A Won" tire remains at the top of their list. Similar to it, except for a special tread, is the "Clincher Salvus," which has been adopted for the British postoffice and other government departments. It is notable particularly for freedom from sideslip. The "B grade" remains the same in quality, but costs more, and for those who do not wish to pay for a first class tire the "C grade" has been introduced.

The company's motorcycle tire branch has now reached important proportions. These tires are made under two designations—"A Won" and "Dreadnought." Each brand is provided either with plain tread or rubber studded (Bailey's patent).

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of india-rubber and gutta-percha for the month of September, 1909, and for the first nine months of five calendar years:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All Other. Rubber.	TOTAL.
September, 1909..	$136,798	$255,732	$380,612	$773,142
January to Aug..	1,164,699	872,074	2,678,534	4,715,307
Total	$1,301,497	$1,127,806	$3,059,146	$5,488,449
Total, 1908...	926,566	1,043,528	2,629,927	4,600,021
Total, 1907...	1,051,903	1,213,992	2,997,815	5,263,710
Total, 1906...	895,296	936,350	2,361,917	4,193,563
Total, 1905...	856,493	941,858	2,129,936	3,928,287

AMERICAN EXPOSITION AT BERLIN.

IT is announced that Mr. J. Pierpont Morgan has accepted the honorary presidency of the exhibition of American Manufacturers to be held in Berlin in April—June, 1910. His royal Highness Prince Henry of Prussia is the honorary president of the German reception committee. Mr. George F. Kunz is chairman of the American advisory committee. Professor George S. Atwood, secretary of the American Association of Commerce and Trade at Berlin, is to be German manager. American headquarters have been opened at No. 50 Church Street, New York, under the management of Mr. Max Vieweger.

PERSONAL AND TRADE NOTES.

MR. HENRY C. PEARSON, editor of THE INDIA RUBBER WORLD, is scheduled to deliver some lectures on india-rubber, at the New York University, before the school of applied science, beginning on December 20.

Mr. A. H. Marks, vice-president of The Diamond Rubber Co., bought a large country estate west of Akron late in October, consisting of more than 30 acres. It was one of the largest real estate transactions of the year in Akron, the price of the land exceeding $85,000.

Mr. David Aldebert Cutler, well known in the rubber trade, and Miss Blanche Mildred, daughter of Mr. and Mrs. William G. Williams, of Malden, Massachusetts, were married on the evening of October 20.

The Bertram Motor Supply Co. have leased for a term of years the premises No. 247 South State street, Salt Lake City, Utah, for the sale of automobile accessories. They will have the exclusive sale for Utah of "Diamond" tires.

FEDERAL RUBBER CO.—INCREASE OF CAPITAL.

THE Federal Rubber Co. (Cudahy, Wisconsin) have increased their capital to $620,000, paid in, and a further increase to $750,000 is contemplated by January 1. They have completed a new building, giving them a capacity of 250 tires a day, and 500 inner tubes. Their business is also good in solid tires and mechanical lines. They have opened a branch at Atlanta, Georgia, with the Dunham Rubber Co., an agency in St. Louis, with the Phoenix Auto Supply Co., and in Kansas City, Missouri, with the Motor Tire and Supply Co.

The Rubber Trade at Akron, Ohio.

By a Resident Correspondent.

EXPANSION OF THE GOODYEAR TIRE COMPANY.

THE most important development of the month among Akron rubber companies is the announcement of the plans for the expansion of the Goodyear Tire and Rubber Co.

At the next annual meeting of the company, on December 5, a large number of new shareholders will be represented, by reason of the sale of several thousand shares of treasury stock during the last few weeks. The stock was offered for sale on the open market and was bought in comparatively small blocks, it is understood, by a number of different interests. The price ranged as high as 165.

One of the new men who will enter the company is Mr. Frank H. Adams, who is to take the office of treasurer, which has heretofore been combined with that of vice president and held by Mr. C. W. Seiberling. Mr. Adams is a life long resident of Akron, being the son of Frank Adams, a pioneer sewer pipe manufacturer here. For a number of years he has been connected with the First National Bank of Akron, and will leave the position of cashier to enter the rubber business.

Rumors have been abroad that the Goodyear company has been merged with the General Motors Co., but such reports are emphatically denied by the officers of the company. What undoubtedly gave rise to them was the contract entered into between the Akron company and the Buick Motor Co., which is the chief factor of the General Motors Co. This is said to be the largest single contract for automobile tires ever made. It will provide equipment for a large part of the 1910 Buick output as well as for a number of cars from the Cadillac, Welsh, Oldsmobile, Oakland, Rapid, and Reliance factories, which are also components of the General Motors company. Mr. C. W. Seiberling informs THE INDIA RUBBER WORLD that the number of sets involved will considerably exceed 20,000.

Mr. F. A. Seiberling confirmed the rumor that overtures had been made to the Goodyear company to remove its factory to Detroit, but, judging by the preparations for additions to the factory here, it is not the intention of the company to make a change. Plans are being made for two factory buildings, five stories high, aggregating 500 feet in length and affording 150,000 square feet of additional floor space. The site of these structures will be the east half of the company's 12-acre property. To make room for them Prune street will have to be vacated by the city council, but when the petition of the company was presented to that body its members expressed themselves as favorable to the concession.

The company now have 1,000 people on their pay rolls, according to the statement of President Seiberling, and after the new additions are in operation from 1,600 to 1,800 will be employed. The new factories will be used for the manufacture of automobile tires. It is expected that 12 or more of the new tire machines already mentioned in THE INDIA RUBBER WORLD will be put into regular use at that time.

The Goodyear Tire and Rubber Co. recently purchased the abandoned plant of the defunct Akron China Co., which adjoins the Goodyear property on the east. Mr. F. A. Seiberling states that the old plant is being remodeled for use as a reclaiming plant. "We are now working out an entirely new process for reclaiming scrap rubber," said Mr. Seiberling. The plant will have a capacity of ten tons a day.

SWINEHART COMPANY'S NEW FACTORY.

THE new pneumatic tire factory of the Swinehart Clincher Tire and Rubber Co. will be ready for equipment with machinery during the first week of December. The building is two stories high, 62 x 150 feet. In it will be installed a new engine, three rubber mills, one calender, and three hydraulic vulcanizers for penumatic tires. The capacity will be 100 pneumatic tires per day. The standard types of automobile clincher and quick detachable tires will be made. Experiments are also being made on a new type of patent automobile pneumatic tire, but officers of the company say that it will not be ready for manufacture before the middle of the next season.

Mr. Claude W. Moody, formerly with the Pennsylvania Rubber Co. (Jeannette, Pennsylvania), has been employed as sales manager by the Swinehart company. To facilitate the distribution of their product the company established during the latter part of November agencies in Washington, Boston, and Buffalo, and others are to be placed in Philadelphia and Indianapolis. "We already have sufficient orders," said Mr. W. W. Wuchter, manager of the company, "to take care of our 1910 output."

BUCKEYE RUBBER CO. REBUILDING.

WORK was started during the last week in November on a new factory building at the plant of the Buckeye Rubber Co. It will be one story high, 208 x 62 feet. Its location will be alongside the structure partly destroyed by fire last summer, which is now being rebuilt. The object of the new building is to enable the company to increase its output of pneumatic automobile tires. These are marketed by the Consolidated Tire and Rubber Co. under the name "Kelly-Springfield." The addition will not affect the output of solid tires. When completed the new building will be equipped with four or five tire hydraulic presses to equip a vulcanizing department. The rest of the space will be used as a machine shop and considerable new equipment is to be purchased for this department.

NEW TIRE PATENT LITIGATION.

PATENT infringement suits involving two Akron companies were started during the past month. Action was instituted against the Rapid Safety Co., of New York, for the alleged infringement of a patent on an automobile tire granted to Edward B. Cadwell and licensed exclusively, according to the claims of the suit, to the Swinehart Clincher Tire and Rubber Co. The tire involved is of the cushion type.

Suit was also started by the Motz Clincher Tire and Rubber Co., of this city, in the United States circuit court in Cleveland with the Swinehart Clincher Tire and Rubber Co. as defendant. The Motz company claim to be the sole owners of patent No. 926,012, covering a tire having webbed sides and a thin tread. A restraining order and damages were asked. The Motz company announce that they expect to start other infringement suits.

SOME DIAMOND COMPANY HISTORY.

MR. OHIO C. BARBER, in an address delivered here November 8, related some interesting inside history of The Diamond Rubber Co., of which he has been a director and leading shareholder since its organization. "The Diamond Rubber Co. commenced business in 1893," he said, "and after passing through a period of changes the present management took charge. The gentlemen who came here at that time were all young men. They were four in number and I don't believe they could have mustered $5,000 among them. They came from Boston and made a proposition to take over the company. It was a problem whether it was a good investment or not, but after mature deliberation and consideration of their recommendations, the owners of the company felt convinced that they were all right and sold half the stock to them, taking their notes for the debt. At that time the amount invested in the company was $500,000 and the working force was 240 people. To-day the money in-

vested is $18,000,000 and the working force is 4,200."

Fifty men attended the annual sales conference of The Diamond Rubber Co., which took place on November 3-5. It was held in the Akron offices of the company and all of the branch managers and leading salesmen were present. The men were taken through the factory and shown the improvements that have been made during the last year. Results of the past year's sales and plans for the coming season were talked over.

AFFAIRS OF THE ALUMINUM FLAKE CO.

SINCE the death of Mr. Frank Reifsnider, vice president and manager of the Aluminum Flake Co., that business has been in charge of Mr. George E. Probert, treasurer of the company. Mr. Probert says that no change will be made in the management of the company until the annual meeting next June. Mr. Reifsnider's funeral was held at his home October 29. It was in charge of the Knights Templar and Buckley Post, G. A. R., of Akron. Burial was in Glendale cemetery, Akron.

THE LATE FRANK REIFSNIDER.

Dr. George A. Kubler, of Berlin, Germany, European representative of the Aluminum Flake Co., arrived in Akron a month ago to take up the matter of organizing a stock company in Berlin for the management of the Flake company's European business. He intends to leave for London in December.

MORE ROOM FOR THE FIRESTONE.

To make room for the new factory which is to be built by the Firestone Tire and Rubber Co. next year, the Akron city council passed ordinances on November 6 vacating parts of Moses, Jasper, Cole and Falor avenues in the extreme southern part of the city. Though protests were made by some property owners against the action the councilmen preferred to arbitrate them rather than place any obstruction in the way of the new enterprise.

AKRON MEN PREPARING TO FLY.

THOUGH Akron's future depends upon the continued popularity of the automobile, it is keeping in the forefront in the aviation field. Two local inventors are at work on aëroplanes, Mr. Fred L. Childs, who has already made preliminary trials of a bi-plane, and Mr. Michael Paridon, an expert in the employ of the Diamond Match Co. The Barberton Aviation Co. has been incorporated to develop the aëroplane invented by the latter.

THE TIRE TRADE IN THE SOUTH.

AKRON manufacturers were extensively represented at the Atlanta show last month. The Goodrich and Diamond products were most in evidence, the representatives of the former company counting 53½ sets of Goodrich tires and the Diamond counting 51 sets. Seventeen automobile tire manufacturers were represented. One hundred and thirty-three sets of Akron tires were on the floor. Considerable attention was also given to the New York to Atlanta run which preceded the show.

"Preparation of the tire trade for future years," said an Akron rubber company official, "is evidenced by the keen attention that is being given to the south. The business is not there at the present time to warrant such attention, but the automobile and tire trade is camping on the trail of what the rapid development of that part of the country will produce in the next few years. With the recently established Diamond branch and the Ajax-Grieb branch established November 1, fourteen tire manufacturers are now represented in Atlanta. Yet the business in the South is strictly a consumers' business. In the whole of Georgia, North Carolina, South Carolina, Mississippi, Alabama, and Florida there are not half as many automobiles as there are in the state of Ohio. The Atlanta automobile show was a failure in so far as the attendance and resulting business was concerned, yet manufacturers feel confident of returns from it in the future."

STILL ANOTHER TIRE COMPANY.

As a solution of the tire problem for heavy vehicles traveling on sand roads, a sectional truck tire has been devised by H. A. Palmer, of Akron. Its manufacture has been started by the Palmer-Hawkins Tire Co., of this city, of which Mr. Palmer is president and general manager and Mr. A. W. Hawkins vice president. A motor truck for use in the sandy roads of Florida has just been equipped by these manufacturers with a set of their tires, measuring 36 x 10 inches. They claim the distinction of having made and applied the largest set of solid rubber truck tires ever manufactured or applied in the United States, if not in the world.

IN THE CHAMBER OF COMMERCE.

MR. H. S. FIRESTONE, president of the Firestone Tire and Rubber Co.; Mr. William A. Johnston, president of the Rubber Products Co., of Barberton; Mr. Joseph Dangel, manager of the Akron plant of the American Hard Rubber Co., and Mr. Will Christy, vice president of the Firestone Tire and Rubber Co., were elected to the board of directors of the Akron Chamber of Commerce at the annual meeting of that organization on November 17. Mr. C. B. Raymond, secretary of The B. F. Goodrich Co., retired at that time after one year's service as president.

STEEL STUDDED TIRES IN FAVOR.

THE adaptability of the automobile as a winter as well as a summer vehicle is expected by local tire men to result from the adoption by American tire manufacturers of the steel studded tire. Though this type has been manufactured considerably in Europe, it is comparatively new here. So far it is manufactured in Akron only by the Diamond Rubber Co. "We look upon the steel studded tire," said an official of that company, "as a happy remedy for the usual winter slump in the tire trade. It is distinctly a tire for use in ice and snow, and its sale at the present time is helping materially in the increase of our fall business."

TIRE PRICES HAVE BEEN HIGHER.

THOUGH there is a general impression that automobile tire prices are higher than ever before, actual comparison of consumers' net prices declared by manufacturers affiliated in the tire makers' association show that prices to-day are from 10 to 30 per cent. lower than they were two years ago. Comparing the last prices issued—those which went into effect September 27, 1909, at the time the second raise in prices in the present year was made, with the prices declared September 16, 1907, the following striking differences, pointed out by an official of an Akron company, are noticeable—the prices for the regular tread clincher casing being quoted:

Size.	1907.	1909.
26 x 2½ inches	$15.60	$13.80
32 x 3 inches	26.10	20.35
30 x 3½ inches	31.55	28.10
28 x 3 inches	22.65	17.75
34 x 4 inches	45.25	43.65
36 x 5 inches	74.45	72.05

This comparison is especially significant, in view of the fact that the highest price for crude rubber when the 1907 prices went into effect was $1.13. The low prices of tires to-day are accounted for in part by the big cut made in September, 1908, at the time rubber went to less than a dollar a pound.

THE PRICE OF TIRES.

MR. A. J. WILLS, assistant sales manager of The B. F. Goodrich Co., informs your correspondent that no increase in the price of automobile tires has been decided upon, but that if the price of rubber stays up, the increase will undoubtedly come. He looks for no substantial relief in the rubber market. Mr. W. B. Miller, secretary of The Diamond Rubber Co., says no increase is contemplated, and Mr. H. S. Firestone, president of the Firestone Tire and Rubber Co., says he knows of no intention to raise prices within the next two months.

A FEW NOTES.

NATURAL gas, which is used by Akron manufacturers for fuel, was secured for another ten years by a contract entered into by the city and the East Ohio Gas Co. November 15. Thirty cents a thousand feet is to be paid for five years and 35 cents for the succeeding five years. The gas is piped from West Virginia.

Mr. S. E. Connor has been succeeded by Mr. M. S. Long as secretary of the United Rubber Co., which absorbed the Aladdin Rubber Co., of Barberton a few months ago.

Mr. Joseph W. Kelley, a shareholder in The B. F. Goodrich Co., who retired as a department manager in that company two years ago, moved with his family to Boston on November 23, to make his home there. A large summer home, which he had just completed at Framingham, Massachusetts, was destroyed by fire early in November. Boston was Mr. Kelley's home when, as a young man, some years ago, he entered the employ of the Goodrich company.

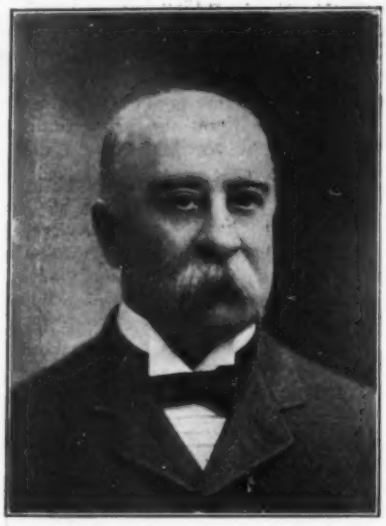
A verdict of $12,000 was returned in the present term of common pleas court here against the American Hard Rubber Co., as a result of a damage suit brought by Lola Pierce, a shop employe for the company, who was struck in the eye with a flying ball of polishing material in the Akron factory of the company two years ago.

THE RUBBER TRADE AT TRENTON.

BY A RESIDENT CORRESPONDENT.

THERE have been important developments in connection with the United and Globe Rubber Manufacturing Cos. since the election of Welling G. Sickel, former mayor of Trenton, as president, and the retirement from the concern of Watson H. Linburg and John S. Broughton. As related in the last number of THE INDIA RUBBER WORLD, Mr. Sickel was elected president at the meeting of the shareholders on October 11, succeeding Mr. Linburg. At the same time Aubrey Love was chosen secretary and treasurer, succeeding Mr. Broughton. Stephen B. Elkins, United States senator from Virginia, and Martin Maloney, of Philadelphia, were elected to the board of directors.

On November 8 Messrs. Linburg and Broughton completed negotiations which again placed them in control of the company. With the aid of other Trenton capitalists they acquired the stock held by Messrs. Sickel, Elkins, and Maloney. The consideration has not been named, but it is said to have been $400 a share, making the transaction, approximately, involve $500,000. Following the formal transfer of the stock Welling G. Sickel and



WATSON H. LINBURG.
[President United and Globe Rubber Manufacturing Cos.]

Senator Elkins presented their resignations as directors and as president and vice president, respectively. The other Sickel directors also resigned. They were: Mrs. Welling G. Sickel, Martin Maloney, J. Harrington Sickel, and Welling Sickel Katzenbach. As soon as the resignations had been accepted Messrs. Linburg and Broughton; William H. Brokaw, of the cracker firm of Exton & Co.; Karl G. Roebling, of the John A. Roebling's Sons Co.; and Wilbur F. Sadler, Jr., adjutant general of the state of New Jersey and president of the Broad Street National Bank, were elected directors. The new board immediately organized and elected Mr. Linburg president and Mr. Broughton secretary and treasurer. The new board at once assumed control of the plant. Karl G. Roebling is one of the heads of the Woven Steel Hose and Rubber Co., with which Mr. Broughton is also connected. It is worthy of note, also, that this is the second time an adjutant general of New Jersey has been identified actively with the United and Globe company, the first one having been the late General Alexander C. Oliphant, of Trenton.

JOHN S. BROUGHTON.
[Secretary and Treasurer United and Globe Rubber Manufacturing Cos.]

FOLLOWING his retirement from the United and Globe, Mr. Sickel has associated himself with the interests controlled by C. M. and H. H. Hewitt, comprising a chain of large manufacturing establishments in the East and West, including the Hewitt Rubber Co., of Buffalo, New York; the Magnus Metal Co., with fourteen plants scattered throughout the United States; the Featherstone Foundry and Machine Co., with works at Chicago; the National Brake Shoe Co., with works at Depew and Chicago; and the Hewitt Supply Co., with works at Chicago. Mr. Sickel will have charge of the direction of sales, a position of very great responsibility. He will be located in a suite of offices in the Trinity building, No. 111 Broadway, New York. In an interview with THE INDIA RUBBER WORLD correspondent, Mr. Sickel declared that he was still comparatively a young man, with a large acquaintance among the railroad officials of the United States, a large and valuable asset, and he would not be doing himself justice to retire from the field he has occupied so long. His interests with the Hewitts will be such that he will spend most of his time in New York, although he said no doubt he would in the future, as in the past, travel at times to all sections of the country. Aubrey Love will accompany Mr. Sickel. He will act as general office manager, at the same address.

* * *

THE American Inner Tube Co., with a capital of $500,000, was incorporated under the laws of New Jersey, at Trenton, on November 13. It is to manufacture and deal in automobile tires, inner tubes, all parts of automobile tires and other rubber goods, as well as parts of automobiles and accessories to automobiles. The stock is divided into 50,000 shares, of a par value of $10 each. The incorporators are H. O. Coughlan, S. A. Anderson and John W. Stout, and their registered address is at No. 15 Exchange place, Jersey City. The New Jersey office is at No. 1041 Clinton street, Hoboken, with O. F. Bugg as the registered agent.

THE RUBBER TRADE IN SAN FRANCISCO.

BY A RESIDENT CORRESPONDENT.

THIS is not the season wherein the mechanical rubber lines are expected to do particularly well, and the present time is no exception to the rule. Mechanical goods departments are very quiet, and owing to the fact that there is still a scarcity of money in this city are perhaps more quiet than they should be, and the rubber establishments will be glad to see the time come when business is again moving along at a more lively rate. The high price of rubber is making the problem more complex. When high prices come during good times it is all right, but the way it is now it is a hard combination. On the other hand, the rubber footwear and clothing lines find a good sale, and all of the wholesalers are clearing their shelves of immense stocks. The rains started early, and each week or so there have been general storms sufficient to start up a lively demand for such goods. Each big rain is felt immediately by the wholesaler, because the retailers leave off their buying of such goods until the last minute, and then they want them in a hurry.

Mr. W. A. Daggett, of San Francisco, who held the position of specialty salesman of fire hose for the Bowers Rubber Works, has left the employ of that firm and will start into business for himself. He will take up the western agency for the Eureka Fire Hose Co., with offices, salesroom and stockroom in San Francisco.

Mr. W. F. Bowers, president of the Bowers Rubber Works, has lately been in the East, where he attended the rubber manufacturers' convention. One of the salesmen connected with the establishment will be selected to take the place of Mr. Daggett in the fire hose department.

There has been a reorganization of the Sterling Rubber Co. Mr. W. L. Conry, one of the original organizers, and who has been acting as vice president since the organization of the corporation, has been elected president and general manager, taking the place of William Perkins, who has severed his connections with the firm. Mr. Willard Wells has been elected vice-president, and Mr. A. R. Ellert, formerly traveling for the firm, has been elected secretary and treasurer. Under the new arrangement it is the intention to devote more attention to the druggists' sundries end of the business. Mr. Conry is a druggists' sundries man, and a large number of new lines will be taken on.

Mr. L. L. Torrey, manager of the coast branch of the Pennsylvania Rubber Co., states that business keeps up very well. The new branch which this firm has started in Los Angeles has been doing especially good work, and a new location has been secured in a modern store at No. 930 South Main street.

Mr. William Perkins, formerly manager for the Sterling Rubber Co., is now connected with the Gorham Rubber Co., and lately has been looking after the business in Oakland, Alameda, and Berkeley.

Mr. A. T. Dunbar, who was formerly the coast manager for the Revere Rubber Co., has secured the agency for the Boston Rubber Co.'s lines, and is coming out to establish an office in San Francisco to act as the western representative of that firm.

Mr. C. E. Mathewson, Pacific coast manager for The Diamond Rubber Co., has returned from his visit to the factory at Akron, Ohio. He was accompanied on his trip by Dan McKay, manager of the branch of the company at Seattle, and by F. O. Nelson, the manger of the Los Angeles branch.

The Barton Packing and Rubber Co. are keeping quite busy in its work of manufacturing, and new machinery is now installed and in operation.

There is considerable manufacturing now in this vicinity, with the American Rubber Manufacturing Co., the Bowers Rubber Works, and the Barton Packing and Rubber Co. engaged, and they are getting the work down so that they can make very close prices.

"Dad" Tracy, who was formerly salesman for the Sterling Rubber Co., has been employed by the Pennsylvania Rubber Co., and he is expecting to be sent to that company's branch store in Los Angeles.

Mr. W. J. Gorham, president of the Gorham Rubber Co., is now in Seattle, visiting the firm's branch store. Mr. F. A. Sargeant, secretary of the San Francisco firm, is now taken from his duties for the time being while serving on the Federal jury.

F. S. Winslow, manager for the Pacific Coast Rubber Co., states that on account of the favorable weather the boot and shoe business has been unusually good. The mechanical goods trade, however, is light.

The Gutta-Percha and Rubber Manufacturing Co. report that business is quiet now, especially in the mechanical lines.

Mr. Kanzee, of the Phoenix Rubber Co., states that his firm is meeting with good success in their new compound for valve and discs, called Ralkanite, the name being a combination of that of the two proprietors, Ralph and Kanzee.

Mr. R. H. Pease, of the Goodyear Rubber Co., states that conditions in a general way are showing improvement. The rains in through the country have been the means of reducing the stocks of boots and shoes, rubber clothing and mackintoshes.

Mr. Benjamin H. Pratt, the new coast representative of The Fisk Rubber Co., has reached the city to take charge of the company's business, vice George E. Johnson, who resigned to take the agency for the Mitchell cars in the Northwest.

RIMS CHEAPER THAN TIRES.—If a tire cannot be repaired when punctured it is best to remove the inner tube before driving any distance on the flat tire. It is even better to remove the casing also and run on the bare rim. The rims will stand a great deal of hard usage and are cheaper than tires. Running for even a short distance on a flat tire will generally damage the casing beyond repair.

News of the American Rubber Trade.

AN AMERICAN FACTORY FOR R. & J. DICK.

AT the annual meeting of R. & J. Dick, Limited, at which a satisfactory report on the year's trading was made, the directors stated that in order to develop business in the United States, the board had resolved to manufacture belting in this country. A favorable site has been secured at Passaic, New Jersey, and arrangements are proceeding for the immediate erection of a complete factory. The company have opened offices in New York, at No. 50 Church street. As is well known, the firm were the pioneer makers of balata belting, a line in which they continue to be largely engaged. The total net profits of the firm for the year were £51,163 [=$248,984.74].

NEW RUBBER STORE IN BRIDGEPORT.

A NEW wholesale and retail store was opened in Bridgeport, Connecticut, on November 17, by Jaycox Rubber Co., at No. 1042 Main street, with a full line of mechanical goods, druggists' sundries, rubber clothing and footwear, and automobile and bicycle tires and sundries. The owner, Mr. Ernest M. Jaycox, lately resigned as secretary and treasurer of The Alling Rubber Co., with whose syndicate of rubber stores he had been connected for nine years. The head salesman of the new house is Mr. Edward Dunn, who also was with the Alling company for nearly nine years.

QUADRUPLEX OCEAN CABLE.

IT is stated that Stephen D. Field, a nephew of Cyrus West Field, who was connected with the laying of the first Atlantic cable, has perfected an instrument in his laboratory at Stockbridge, Massachusetts, by the use of which four messages can be sent over a single cable simultaneously. The device is now being used successfully on the cable between Key West, Florida, and Havana, Cuba, and proved serviceable during the recent severe storm. Heretofore it has been possible to send only one message at a time over a cable. Mr. Field has obtained patents on his invention. It was Mr. Field who invented and operated successfully in Stockbridge, early in the eighties, the first American trolley car.

THE TILLINGHAST TIRE PATENTS.

THE Single Tube Automobile and Bicycle Tire Co. have instituted suits against several manufacturers licensed to make tires under the Tillinghast patents to recover royalties claimed to be due and not paid. The suit recently decided in the favor of the patent holding company against the Continental Rubber Works was pending so long that some of the licensees ceased to pay the royalty, on the ground that the action was not being pressed and that they were not receiving the protection due them. When the court rendered its decision several of the licensees paid up and suits are being instituted against the others.

DELAFOND'S GUAYULE PROCESS.

IN reporting on an analysis of guayule produced by Mr. E. Delafond, of Mexico, by a new "physico-mechanical" process, at the "La Victoria" works, hacienda de Sierra Hermosa, at Catorce, state of San Luis Potosi [see THE INDIA RUBBER WORLD, November 1, 1909—page 49], a typographical error occurred which robs the statement of value. The correct figures are:

Pure caoutchouc	88 per cent.
Resin	7 per cent.
Moisture	5 per cent.
Total	100 per cent.

GOOD EXERCISE FOR "CATS PAW" HEELS.

CHARLES A. KING, who started from Port Arthur, Manchuria, in 1905, to walk around the world, and in so doing covered 56,000 miles, left Montreal on October 29, 1909, to walk to Vancouver over the Canadian Pacific railway tracks, a distance of 2,896 miles, on "Cats Paw" rubber heels, made by Foster Rubber Co. (Boston). He expected to make the entire distance on this one pair of heels. Mr. King carries samples of the heels and makes sales in each town that he visits.

LEATHER BELTING TRADE.

THE annual meeting of the Leather Belting Manufacturers' Association was held at the Hotel Astor, in New York, on November 17, 1909, with a full attendance. Subjects of general interest were taken up relating to freight classification of leather belting, the deep waterways of the Atlantic seaboard, and the credit bureau. A general discussion of matters affecting business affairs was held. The officers for the ensuing year are as follows:

President, Charles T. Page, president; F. A. M. Burrell and Milton H. Cook, vice presidents; George H. Blake, secretary and treasurer. There was a luncheon at the Hotel Astor.

A NEW FIRM IN CRUDE RUBBER.

MR. ROBERT BADENHOP, who has just begun business on his own account in New York, as a broker and importer of crude india-rubber, gutta-percha, and balata, has had a business career which has given him a good knowledge of this trade, having been connected with rubber houses for the past eight years in London, Hamburg, and New York. He has lately returned from Europe, where he formed important connections. In his imports the new business will be backed by the important dry goods firm of Fred Vietor & Achelis, at No. 66 Leonard street, at which address the office of Badenhop will be located.

TRADE NEWS NOTES.

THE fee paid by The Diamond Rubber Co. (Akron, Ohio), for filing with the secretary of state a certificate of increase of capital stock to $10,000,000, was $5,000.

The Converse Rubber Shoe Co. are driving artesian wells with a view to providing an independent water supply for their factory at Malden, Massachusetts.

The Boston Rubber Shoe Co. are reported as having protested against an increase in the assessed valuation of their real estate at Malden, for taxation purposes, from $365,800 to $573,400.

Mr. E. R. Barton, general manager of the Dove Machine Co. (Lawrence, Massachusetts), who is doing an excellent business with the rubber trade in special machinery and molds, was a recent caller at the offices of THE INDIA RUBBER WORLD.

Edward J. Kane, No. 50 Ann street, New York, specializes in the purchase and sale of condemned fire hose, in which, during twenty-five years, he has built up a large business.

With a view to improving the fire protection system of Morrisville, Pennsylvania, The Vulcanized Rubber Co., whose factory is located there, have donated to public use a tall steel tower—used by them formerly as a water tower—upon which to mount a fire alarm bell which can be heard throughout the town.

The Strong Machinery and Supply Co. (No. 48 Franklin street, New York), manufacturers of and dealers in packings, are selling agents for the United States of the Harburger Gummi-Kamm Co.

Both of the Wright brothers and Glenn H. Curtiss have been invited to the Aëronautic Symposium that the Rubber Club of America are holding on December 13 at the Algonquin Club, in Boston. It is not certain that they can be present, but the brilliant array of speakers that have already accepted and the moving pictures of aëroplanes in flight assure an entertainment of unusual interest, covering a subject that is to-day uppermost in all minds.

MR. MATLACK LEAVES MILLTOWN.

MR. JAMES C. MATLACK, vice president and general manager of the Michelin Tire Co. (Milltown, New Jersey), since the establishment of the Michelin interest in America, has resigned his connection with that company. Beginning his business career in the bicycle department of the Simmons Hardware Co., in St. Louis, Mr. Matlack's advancement was rapid until he became connected in an important way with the American Bicycle Co. In the fall of 1902 he resigned to join the International A. & V. Tire Co. at Milltown, New Jersey, of which he became president, and when this company was succeeded by the Michelin Tire Co. he became an official of the latter, as above stated. Mr. Matlack has been exceptionally successful as an organizer, business getter, and executive, and his next step in business will be followed with interest.

ESTATES OF FORMER RUBBER MEN.

THE widow of Robert D. Evans, the first president of the United States Rubber Co., who died in Boston on July 6, has filed an inventory of his estate with the Massachusetts tax commissioner. The actual market value on the day of his death is stated at $10,538,103, a large part being in copper mining shares. The bank deposits were $2,000,084, and the paintings in the residence of Mr. Evans have been appraised at $340,000.

The will of Charles A. Hodgman, of the Hodgman Rubber Co., who died on October 5, has been filed with the surrogate at White Plains, New York. The estate, the amount of which is not stated, is left entirely to the widow and son of the testator, in trust, the income to be paid to Mrs. Hodgman during her life time. At her death it is to be divided between the son and a daughter.

RECEIVER FOR GOSHEN TIRE AND RUBBER.

GEORGE P. ROWELL has been appointed receiver for the Goshen Tire and Rubber Co. (Goshen, Indiana), on the petition of Chester O. Henderson, of Indianapolis, in the United States circuit court, who sues for alleged unpaid salary. The company nameed rented the factory some time operated by the Goshen Rubber Co., but closed some time ago.

THERMOID RUBBER CO.—EXTENSION OF PLANT.

THE Thermoid Rubber Co. (Trenton, New Jersey), have been making extensive extensions and improvements in their plant. One of the new buildings is illustrated on this page. It is 120 x 120 feet in size, of brick and steel construction. The ceiling of the first story is 16 feet high, and in the second story 14 feet on the sides, running to 27 feet in the center. The interior is painted white. The molds and machinery being painted black, a very pretty contrast results. The machinery is motor driven. The plant is equipped with heating and cooling devices of the most modern type. The welfare and the comfort of the men have been considered, both floors being equipped with the most improved washrooms, toilets, lockers, and the like. The sign facing the railroad, which will be noted in the cut, is attracting considerable attention, the same being of blue and white porcelain 58 feet long and 5 feet high. It is said to be the finest sign of the kind ever built. The first floor will be devoted principally to mold work of all kinds, and the second floor to automobile tires and tubes and other accessories.

RETIREMENT OF MR. LOEWENTHAL.

On December 1 Mr. Rudolph A. Loewenthal, vice-president of the U. S. Rubber Reclaiming Works (New York), and his son, Clarence H. Loewenthal, secretary of the company, are retiring. It is not probable that Mr. Loewenthal, senior, will engage in active business, though he will remain a director in the company. His son is to take an active interest in a line of business not connected with the rubber trade.

This news leads one to review briefly the many years of success that have attended Mr. Loewenthal as a rubber man. It will be remembered that back in 1881 he began with a small reclaiming factory at Creskill, New Jersey. Then in 1884 the firm of Loewenthal & Morganstern was incorporated, with a factory in Jersey City. Later came the so-called reclaiming trust—The Rubber Reclaiming Co.—incorporated in 1891, and of which Mr. Loewenthal was treasurer until 1894. This was dissolved in 1895, Mr. Loewenthal leaving the rubber business for awhile to become president of the Manhattan Fire Insurance Co. and the Fire Association of New York. In 1899 he sold these out and started up again the Jersey City plant, which for five years had been leased to the New Jersey Car Spring and Rubber Co. The business was incorporated as the Loewenthal Rubber Co. Soon after this he amalgamated with the reclaiming company at Derby and the U. S. Rubber Reclaiming Works, the latter name being retained by the combined business. The history of the company has since been one of continuous success, its growth being represented by the establishment and operation of the great plant at Buffalo, New York.

GLENDALE ELASTIC FABRICS CO.

IMPORTANT additions are being made to the plant of this company, at Easthampton, Massachusetts. When completed the capacity of the works will allow for the introduction of 120 additional looms. There will also be an increased amount of room in the making up and shipping departments.

ONE OF THE NEW BUILDINGS OF THE THERMOID RUBBER CO.

UNITED STATES RUBBER CO.'S ISSUES.

TRANSACTIONS on the New York Stock Exchange for four weeks, ending November 20:

COMMON STOCK, $25,000,000.

[Less $1,344,000 in treasury of a subsidiary company.]
Last Dividend, April 30, 1900—1%.

Week October 30.	Sales	9,375 shares	High	50¼	Low	45¼
Week November 6.	Sales	500 shares	High	119¾	Low	118⅛
Week November 13	Sales	900 shares	High	50⅛	Low	49½
Week November 20	Sales	17,700 shares	High	54¾	Low	49¾

For the year—High, 57⅜, Aug. 19; Low, 27, Feb. 24.
Last year—High, 37½; Low, 17½.

FIRST PREFERRED STOCK, $36,263,000.

Last Dividend, Oct. 30, 1909—2%.

Week October 30..	Sales	2,225 shares	High	119½	Low	117½
Week November 6.	Sales	500 shares	High	119¾	Low	118½
Week November 13	Sales	710 shares	High	118½	Low	118¼
Week November 20	Sales	1,920 shares	High	120	Low	118

For the year—High, 123½, Aug. 24; Low, 98, Jan. 29.
Last year—High, 108; Low, 76.

SECOND PREFERRED STOCK, $9,965,000.

Last Dividend, Oct. 30, 1909—1½%.

Week October 30.	Sales	630 shares	High	85¼	Low	84
Week November 6.	Sales	300 shares	High	85½	Low	85½
Week November 13	Sales	700 shares	High	85⅛	Low	84⅜
Week November 20	Sales	200 shares	High	85	Low	84½

For the year—High, 89½, Aug. 23; Low, 67¼, Feb. 25.
Last year—High, 75½; Low, 42.

SIX PER CENT. CERTIFICATES, $20,000,000.

$15,000,000 issued.

Week October 30..	Sales	126 certs.	High	104¾	Low	104½
Week November 6.	Sales	60 certs.	High	105¼	Low	104¾
Week November 13	Sales	88 certs.	High	105	Low	104¼
Week November 30	Sales	49 certs.	High	104⅞	Low	104¼

TRIBUTE TO THE LATE MR. ALLERTON.

AT a meeting of the committee on resolutions of the New England Rubber Co. the following tribute to the late George M. Allerton, whose death was reported in the last INDIA RUBBER WORLD, was adopted:

WHEREAS, The members of the New England Rubber Club have lost by death their friend and associate, George M. Allerton, who for many years has served one of our leading companies in its branch of the business, and who by his energy, industry, and ability, attained a position of trust and responsibility in the trade, and by his genial and loyal personality endeared himself to those with whom he came in contact; it is hereby

Resolved, That this Club extend to his family its deep and sincere sympathy.

Resolved, That these resolutions be spread upon the records of the Club and a copy engrossed and sent to his family.

GEORGE P. WHITMORE, Chairman;
ALEXANDER M. PAUL,
ELSTON E. WADBROOK,
Committee on Resolutions.

Boston, October 30, 1909.

TIRES AT THE ATLANTA AUTOMOBILE SHOW.

EVERY tire manufacturer of importance in the United States and most of the smaller concerns in this trade were exhibitors at the Automobile show, held in Atlanta, Georgia, November 6-13. It seems unnecessary to mention these concerns specifically, since they will be on exhibition in the large New York show a month hence. It is not meant to imply here, however, that the Atlanta automobile show was not an event of importance. Not only were all the tire manufacturers represented there, but the number of makes of automobiles on exhibition was larger than is usual in any one automobile show in New York or Chicago. The city of Atlanta is, more than any other, typical of the "new South." When that division of the United States still remained isolated in so many ways from the rest of the country, Atlanta strove to keep pace with the national progress, with such success that to-day no other city in the country of the same size has made more advancement. Atlanta has the advantage, geographically, of being the center of the south more definitely than any other place on the map, which fact is illustrated by the tendency of railroad systems to converge to that point. The importance of Atlanta in a commercial way was long ago recognized in the rubber trade, and most of the important concerns in this line opened branches in Atlanta before opening them elsewhere in the South. To-day every tire manufacturer of importance has a branch office in Atlanta, and the automobile manufacturers are following suit. Georgia is one of the most progressive states in the Union and becoming one of the most prosperous. For these reasons it is not surprising that the good roads movement is making great headway there. This, of course, implies that automobiling is gaining favor in the state, and that ultimately the farmers of Georgia will be automobile owners as generally as in the Central West, where the automobile first made its advent in agricultural regions.

BOSTON WOVEN HOSE AND RUBBER CO.

THE Boston Woven Hose and Rubber Co. have filed with the secretary of state of Massachusetts a statement of their financial conditions as required by the statutes, for their business year ending August 31, 1909, the details of which are reproduced below, in comparison with which are given also the figures for the preceding year:

ASSETS.

	1909.	1908.
Patents	$1.00	$1.00
Land and buildings	825,435.97	785,799.71
Machinery and tools	562,340.97	508,300.78
Cash	403,168.00	77,984.35
Accounts receivable	468,518.90	467,564.05
Office furniture	1.00	1.00
Merchandise	665,948.96	674,113.69
Total	$2,925,414.80	$2,513,764.58

LIABILITIES.

	1909.	1908.
Capital stock, preferred	$750,000.00	$750,000.00
Capital stock, common	750,000.00	450,000.00
Loans	455,000.00	695,000.00
Accounts payable	47,789.20	43,669.33
Accrued wages	8,456.80	.....
Surplus	914,168.80	575,095.25
Total	$2,925,414.80	$2,513,764.58

NEW RUBBER RECLAIMING PLANT.

THE purchase is reported, by J. H. Stedman & Co., Inc., scrap rubber merchants in Boston, of a disused manufacturing plant at South Braintree, Massachusetts, which they purpose converting into a rubber reclaiming factory. The premises referred to are known as the Hollingsworth & Whitney paper mill.

TRADE NEWS NOTES.

THE Elwell Rubber Co. (Trenton, New Jersey) have been made defendants in a suit in the United States circuit court, brought by the Foster Rubber Co., alleging infringement of patents granted to one Beebe.

Imperial Belting Co., Arthur R. Shurtleff, manager (Chicago), have removed from Dearborn street to No. 166 West Kinzie street.

The volume of business done by the rubber stamp and allied trades of St. Louis is estimated by a local newspaper at $165,000 yearly. There are six houses in the trade, and customers are found as far away as Mexico.

The Gladiator Packing and Rubber Co., of Los Angeles, California, have increased their capital stock to $200,000.

The New York fire department, on September 29, awarded contracts for 30,000 feet of 2½-inch cotton fabric rubber-lined hose—one-half each for Manhattan borough and for the boroughs of Brooklyn and Queens.

The excellent monthly publication *Steam*, devoted to the interests of steam users, has been purchased from the Gage Publishing Co. by the Ferguson Publishing Co., No. 114 Liberty street, New York, who will issue it hereafter.

Review of the Crude Rubber Market.

RUBBER quotations at this date show a distinct decline from the level which has been maintained for some time past. The decline applies to most of the standard grades, including everything under the head of Parás. An actual advance is reported, however, in a few preferred African sorts, the supply of which is limited. Guayule is quoted higher, and Pontianak has gone up to an exceptionally high figure.

Manufacturers, as a rule, are showing less interest in the market, doubtless owing to having covered their most pressing requirements, and in view to the accumulation of visible supplies. But holders continue firm in their position.

The arrivals of rubber at Pará (including caucho) during November were somewhat larger than usual, thus bringing the total for the present crop season to a somewhat larger figure than in any former year, whereas during the first four months of the season the arrivals were smaller than in preceding years. The details by months follow:

	1906.	1907.	1908.	1909.
July .....*tons*	1,840	1,370	1,300	1,400
August	1,690	1,500	1,890	1,870
September	2,070	2,410	2,355	2,020
October	3,030	3,200	3,460	3,275
November	3,480	3,200	3,430	*a*4,060
Total	12,110	11,680	12,435	12,625

[*a*—To November 27, 1909.]

Receipts at Manàos, which ultimately are included in the Pará statistics, up to the end of October were smaller than for the same period last year, counting rubber alone, and slightly larger if caucho be included.

THE LATEST QUOTATIONS.

Following are the quotations at New York for Pará grades, one year ago, one month ago, and November 30—the current date:

PARA.	Dec. 1, '08.	Nov. 1, '09.	Nov. 30.
Islands, fine, new.....	114@115	185@187	173@174
Islands, fine, old.....	none here	none here	174@175
Upriver, fine, new.....	123@124	203@204	194@195
Upriver, fine, old.....	127@128	none here	195@196
Islands, coarse, new.....	60@ 61	71@ 72	71@ 72
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	92@ 93	...@124	117@118
Upriver, coarse, old.....	none here	none here	none here
Cametá	63@ 64	84@...	82@ 83
Caucho (Peruvian), ball...	90@ 91	115@...	105@106
Caucho (Peruvian), sheet.	74@ 75	...@ 88	none here
Ceylon, fine, sheet.....	129@130	none here	207@208
Ceylon, crepe.....	.....	...@220	208@210
AFRICAN.			
Lopori, ball, prime.....	112@113	...@135	136@137
Lopori, strip, prime.....	86@ 87	none here	none here
Aruwimi	.....	121@122	118@119
Upper Congo, ball, red....	.....	129@130	123@124
Ikelemba	none here	none here	none here
Sierra Leone, 1st quality..	97@ 98	122@123	118@119
Massai, red	97@ 98	...@124	118@119
Soudan niggers	85@ 86	...@109	107@108
Cameroon, ball	62@ 63	89@ 90	86@ 87
Benguela	62@ 63	81@ 82	75@ 76
Madagascar, pinky	89@ 90	...@102	98@ 99
Accra, flake	21@ 22	23@...	22@ 23
CENTRALS.			
Esmeralda, sausage.....	83@ 84	97@ 98	99@100
Guayaquil, strip.....	69@ 70	85@ 86	84@ 85
Nicaragua, scrap.....	81@ 82	95@ 96	96@ 97
Panama	60@ 61	84@ 85	82@ 83
Mexican, scrap	80@ 81	97@ 98	96@ 97
Mexican, slab	58@ 60	84@ 85	82@ 83
Mangabeira, sheet	56@ 57	82@ 83	67@ 70
Guayule	36@ 37	50@ 51	59@ 60
EAST INDIAN.			
Assam	92@ 93	none here	94@ 95
Pontianak	.....	...@5¼	6@6½
Borneo	35@ 45	52@ 53	55@ 64

Late Pará cables quote:

Per Kilo.		Per Kilo.
Islands, fine..... 7$850	Upriver, fine.....10$300	
Islands, coarse..... 2$900	Upriver, coarse.....	
	Exchange .....15 19/32*d.*	
Latest Manáos advices:		
Upriver, fine.....10$450	Exchange .....15 21/32*d.*	
Upriver, coarse..... 5$400		

Statistics of Para Rubber (Excluding Caucho.)

	NEW YORK. Fine and Medium.	Coarse.		Total 1909.	Total 1908.	Total 1907.
Stocks, Sept. 30...*tons*	62	80	=	142	79	173
Arrivals, October.....	814	366	=	1180	1458	1313
Aggregating	876	446	=	1322	1537	1486
Deliveries, October....	746	360	=	1106	1316	1316
Stocks, October 31..	130	86	=	216	221	170

	PARA. 1909.	1908.	1907.	ENGLAND. 1909.	1908.	1907.
Stocks, Sept 30....*tons*	755	440	572	325	285	550
Arrivals, October.....	2740	3160	2950	730	805	895
Aggregating	3495	3600	3522	1055	1090	1445
Deliveries, October	3265	3080	3105	825	825	850
Stocks, October 31...	230	520	417	230	265	595

	1909.	1908.	1907.
World's visible supply, October 31....*tons*	2,537	2,742	2,779
Pará receipts, July 1 to October 31.....	7,460	7,830	7,670
Pará receipts of Caucho, same dates.....	1,140	1,130	880
Afloat from Pará to United States, Oct. 31	966	586	835
Afloat from Pará to Europe, October 31..	895	1,150	762

African Rubbers.

NEW YORK STOCKS (IN TONS).

October 1, 1908.....	134	May 1, 1909.....	268
November 1.....	134	June 1.....	156
December 1.....	179	July 1.....	268
January 1, 1909.....	156	August 1.....	130
February 1.....	157	September 1.....	123
March 1.....	200	October 1.....	67
April 1.....	178	November 1.....	134

Antwerp.

THE rubber offered at the monthly inscription on November 18 consisted of 124 lots, comprising about 254 tons, whereof 196 tons were of Congo sorts. A notable feature was the percentage of plantation rubber, no less than 36 tons appearing from the Malay states alone. The following table affords a

Rubber Scrap Prices.

LATE New York quotations—prices paid by consumers for carload lots, per pound—show a slight advance since last month:

Old rubber boots and shoes—domestic.....	10¾@10⅞
Old rubber boots and shoes—foreign.....	10¼@10⅜
Pneumatic bicycle tires.....	7 @ 7⅛
Automobile tires	7½@ 7⅞
Solid rubber wagon and carriage tires.....	9⅜@ 9½
White trimmed rubber	10 @11
Heavy black rubber.....	6½@ 6¾
Air brake hose	5 @ 5¼
Garden hose	2⅞@ 3
Fire and large hose.....	3¼@ 3⅜
Matting	1⅞@ 2

classification of the offerings, with the range of brokers' estimations—in francs per kilogram—on the different qualities under each heading:

GRADES.	Kilograms.	Estimations.
Congo	6,462	6.25@14.25
Congo Katauga	4,596	11.00@14.50
Congo Djuma	16,038	7.25@10.75
Congo Kassi	74,792	7.25@14.50
Congo Plantation (*Manihot*)	198	13.50@21.50
Upper Congo	17,499	7.00@14.35
Upper Congo Mongala	3,011	10.70@12.50
Upper Congo Aruwimi	51,224	9.30@13.40
Upper Congo Bokola	3,272	10.75
Upper Congo Equateur	6,237	14.50@14.70
Upper Congo Uelé	9,145	13.00@14.50
Upper Congo Lomami	3,438	8.25@13.90
Soudan Niggers	6,650	11.50@13.00
Nigerian Lumps	2,334	7.75
Madagascar	700	7.75
Rio Nunez (Upper Niger)	1,200	14.00
Peruvian Tails	934	9.25
Sumatra	238	14.75@15.00
Batavia	7,009	5.50@12.50
Java	1,724	12.50@15.00
Java Biscuit (plantation)	49	24.50
Straits Settlements (plantation)	36,157	19.20@15.00
Dutch East Indies (plantation)	620	14.75
Total	253,527	

Sales amounted to 216 tons. Prices realized averaged a decline of about 1 per cent. below estimations. Plantation sorts did not realize expectations. A few choice lots of Congo sorts, however, sold at an advance, including—

		Estimation.	Sold.
2404 kilos	Upper Congo ueté	14.50	15.02½
1952 "	Upper Congo Equateur	14.20	15.02½
9366 "	Congo Kasai black I.	15.50	14.67½
1839 "	Upper Congo ordinary	14.35	14.40
301 "	Congo Katanza	14.50	14.92½

Stocks remaining after the sale were about 580 tons. Next sale December 16, when about 600 tons will be offered.

ZELLER, VILLINGER & Co. report [October 21]:

In every one of our circulars of late we have drawn the attention upon the low level of prices for medium sorts compared with prices for Pará grades. In to-day's auction here the unproportional difference in prices has again been lowered in so far as sale's results turn out at about 6 per cent. above valuations. For a lot black Pará rather mixed 14.75 francs [=$2.80] has been paid. Next auction here will take place about the end of next month and include likely about 500 tons. The future of the rubber market seems rather uncertain. The near future entirely denends upon the state of the navigation on the Amazon river and its tributaries. If low water continues—as it seems it will do still—present high prices are likely to rule until December or January next, just as it was the case some years ago. However, a reaction later on seems to us unavoidable, though the same may perhaps turn out less sharp than many people may expect at present, for it must be borne in mind that consumption of rubber everywhere is very big and still increasing.

Rubber Receipts at Manaos.

DURING October and four months of the crop season, for three years [courtesy of Messrs. Scholz & Co.]:

	October.			July-October.		
FROM.	1909.	1908.	1907.	1909.	1908.	1907.
Rio Purús-Acre .....*tons*	624	1,113	952	1,896	2,515	2,107
Rio Madeira	586	304	196	1,328	1,175	1,036
Rio Juruá	324	180	156	619	598	465
Rio Javary-Iquitos	707	383	508	1,034	896	1,034
Rio Solimoes	100	152	209	240	253	395
Rio Negro	10	6	2	14	6	3
Total	2,351	2,138	2,023	5,131	5,443	5,040
Caucho	415	214	222	1,176	846	784
Total	2,766	2,352	2,245	6,307	6,289	5,824

Rotterdam.

AT the inscription on November 9 about 9½ tons of Java plantation rubber was offered in 18 lots, of which 205 kilograms were *Hevea*, 8,720 *Ficus*, and 568 *Castilloa*—total, 9,493 kilograms.

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weight in Pounds.]

OCTOBER 25.—By the steamer *Cuthbert*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	TOTAL.
Poel & Arnold	228,800	24,000	85,100	24,400 =	362,300
New York Commercial Co..	217,000	65,800	65,100	6,600 =	354,500
General Rubber Co.	59,300	5,300	45,000	..... =	109,600
Hagemeyer & Brunn	42,200	.....	56,800	..... =	99,000
A. T. Morse & Co.	32,200	2,500	22,100	..... =	56,800
C. P. dos Santos	6,400	700	.....	..... =	7,100
L. Hagenaers & Co.	3,100	700	900	..... =	4,700
Total	589,000	99,000	275,000	31,000 =	994,000

NOVEMBER 4.—By the steamer *Polycarp*, from Manáos and Pará:

A. T. Morse & Co.	134,200	6,600	84,300	..... = 225,100
New York Commercial Co...	97,600	22,400	25,900	41,700 = 187,600
General Rubber Co.	97,100	15,500	45,400	1,000 = 159,000
Poel & Arnold	55,700	5,000	68,000	..... = 129,300
Hagemeyer & Brunn	70,600	6,000	35,600	..... = 112,200
C. P. dos Santos	61,000	3,600	9,900	8,600 = 83,100
Edmund Reek & Co.	8,900	.....	7,300	..... = 16,200
L. Johnson & Co.	.....	.....	7,900	..... = 7,900
Total	525,100	59,100	284,900	51,300 = 920,400

NOVEMBER 13.—By the steamer *Clement*, from Manáos and Pará:

General Rubber Co.	336,300	59,900	81,200	2,100 = 479,500
Poel & Arnold	150,300	22,900	74,100	..... = 247,300
A. T. Moore & Co.	114,500	9,100	83,000	500 = 207,100
New York Commercial Co....	110,600	18,000	49,200	23,900 = 201,700
Hagemeyer & Brunn	23,600	1,400	24,400	..... = 49,400
Edmund Reek & Co.	4,300	700	3,300	..... = 8,300
G. Amsinck & Co.	700	.....	5,300	..... = 6,000
Total	740,300	112,000	320,500	26,500 = 1,199,300

PARA RUBBER VIA EUROPE.

	POUNDS.
OCT. 22.—By the *Lusitania*=Liverpool:	
General Rubber Co. (Fine)	8,000
OCT. 23.—By the *Cedric*=Liverpool:	
Raw Product Co. (Coarse)	7,000
OCT. 25.—By the *Allianca*=Mollendo:	
W. R. Grace & Co. (Caucho)	17,000
OCT. 28.—By the *Bluecher*=Hamburg.	
W. L. Gough Co. (Coarse) 6,500	
New York Com. Co. (Coarse) 4,000	10,500
OCT. 29.—By the *Mauretania*=Liverpool:	
New York Com. Co. (Fine) 25,000	
Poel & Arnold (Fine) 45,000	
General Rubber (Fine) 11,500	
General Rubber Co. (Coarse) 22,500	104,000
Nov. 1.—By the *Lapland*=Antwerp:	
A. T. Morse & Co. (Fine)	4,500
Nov. 1.—By the *Baltic*=Liverpool:	
Livesey & Co. (Fine)	4,500
Nov. 3.—By the *Carmania*=Liverpool:	
Poel & Arnold (Fine) 56,000	
General Rubber Co. (Fine) 11,000	
General Rubber Co. (Coarse) 11,500	78,500
Nov. 6.—By the *Campania*=Liverpcol:	
General Rubber Co. (Fine) 45,000	
New York Com. Co. (Fine). 5,500	50,000
Nov. 12.—By the *Lusitania*=Liverpool:	
General Rubber Co. (Fine)	25,000
Nov. 13.—By the *Celtic*=Liverpool:	
Livesey & Co. (Coarse)	7,000

OTHER NEW YORK ARRIVALS.

CENTRALS.

[*This sign, in connection with imports of Centrals, denotes Guayule rubber.]

	POUNDS.
OCT. 22.—By the *Eitel*=Colombia:	
Maitland, Coppell Co. 11,500	
A Held 5,500	17,000
OCT. 22.—By the *Advance*=Colon:	
G. Amsinck & Co. 14,000	
Isaac Brandon & Bros. 9,000	
J. Sambrada & Co. 4,000	
A. Santos & Co. 3,500	
Mecke & Co. 3,000	
L. Johnson & Co. 2,000	
American Trading Co. 2,000	
Piza, Nephews Co. 1,500	
Andean Trading Co. 1,000	
Dumarest Bros. 1,000	41,000
OCT. 22.—By the *Byron*=Bahia:	
Poel & Arnold 23,000	
J. H. Rossback & Bros. 17,000	
A. Hirsch & Co. 13,500	
New York Commercial Co... 11,500	£5,000
OCT. 23.—By the *Cedric*=Liverpool:	
Rubber Trading Co. 22,500	
Raw Product Co. 25,000	47,500
OCT. 23.—By *El Monte*=Galveston:	
Continental-Mexican Rub. Co. *190,000	
Ed. Behringer *10,000	*200.000
OCT. 23.—By the *Allianca*=Colon:	
Isaac Brandon & Bros. 10,000	
G. Amsinck & Co. 5,500	
Andean Trading Co. 2,500	
Manhattan Rubber Mfg. Co.. 2,000	
National Sewing Machine Co. 1,500	
Mecke & Co. 1,000	
Dumarest Bros. 1,000	23,500
OCT. 27.—By the *El Sud*=New Orleans:	
A. T. Morse & Co. 1,000	
A. N. Rotholz 1,000	
Manhattan Rubber Co. 1,000	3,000
OCT. 28.—By the *Carib*=Honduras:	
Eggers & Co.	6,500
OCT. 28.—By the *Hugin*=Tampico:	
Ed. Maurer *160,000	
Poel & Arnold *70,000	
New York Commercial Co... *34,000	*264,000
OCT. 28.—By the *Thames*=Colon:	
New York Commercial Co.... 20,000	
Maitland, Coppell & Co. 3,500	
G. Amsinck & Co. 3,500	
A. Held 3,000	
Kunhardt & Co. 2,500	
Suzarte & Whitney 2,000	
A. M. Capen's Sons 1,500	
A. Rosenthal & Sons 1,500	
Isaac Brandon & Bros. 2,000	
R. Gallego & Co. 1,000	40,500
OCT. 29.—By the *Mauretania*=Liverpool:	
George A. Alden & Co.	45,000
OCT. 29.—By the *Morro Castle*=Mexico:	
H. Marquardt & Co. 5,500	
Harburger & Stack 5,000	
Chilean Export Co. 3,500	
A. T. Morse & Co. 1,000	
E. N. Tibbals & Co. 1,000	
W. L. Wadleigh 1,000	17,000
Nov. 1.—By the *Oregona*=Mexico:	
George A. Alden & Co.	13,500
Nov. 1.—By the *Colon*=Colon:	
L. Johnson & Co. 10,000	
Piza, Nephews & Co. 8,500	
G. Amsinck & Co. 7,500	
J. Sambrada & Co. 1,500	

Dumarest Bros.	1,500	
Meyer Hecht	1,000	30,000
Nov. 1.—By *El Mar*=Galveston:		
Continental Mexican Rubber Co.		*330,000
Nov. 3.—By the *Joachem*=Colon.		
A. Santos & Co.	10,000	
G. Amsinck & Co.	3,000	
Roldan & Von Skle	1,500	
L. Johnson & Co.	1,000	
A. Held	1,000	16,500
Nov. 4.—By the *Yummeri*=Tampico:		
Ed. Maurer	*100,000	
Poels & Arnold	*56,000	*156,000
Nov. 4.—By *El Alba*=Galveston:		
Continental-Mexican Rubber Co.		*70,000
Nov. 5.—By the *Vasari*=Bahia:		
J. D. Rossback & Bros.	50,000	
New York Commercial Co.	30,000	
Poel & Arnold	22,500	
A. Hirsch & Co.	22,500	125,000
Nov. 6.—By the *Matanzas*=Tampico:		
Ed. Maurer	*55,000	
New York Commercial Co.	*35,000	
Poel & Arnold	*30,000	*120,000
Nov. 8.—By the *Panama*=Colon:		
G. Amsinck & Co.	13,500	
A. Santos & Co.	2,500	
L. Johnson & Co.	2,500	
J. Lambrada & Co.	1,500	
Piza, Nephews & Co.	1,500	
Dumarest Bros.	1,000	
Henry Mann & Co.	1,000	23,500
Nov. 10.—By *Siberia*=Greytown:		
G. Amsinck & Co.	3,500	
Jose Julia & Co.	1,500	
Suzarte & Whitney	1,000	
Isaac Brandon & Bros.	3,000	9,000
Nov. 11.—By *El Dia*=Galveston:		
Continental-Mexican Rubber Co.		*165,000
Nov. 11.—By the *Atrato*=Colombia:		
J. H. Rossbach & Bros.	7,500	
A. M. Capen's Sons	2,000	
Maitland, Coppell & Co.	5,500	
A. Held	1,500	
W. R. Grace & Co.	2,000	
J. Sambrada & Co.	1,000	
American Trading Co.	1,000	20,500
Nov. 13.—By the *Mexico*=Frontera:		
Harburger & Stack	1,500	
H. Marquardt & Co.	1,500	
E. Steiger & Co.	1,000	
A. Dumont & Co.	1,000	
A. Klipstein & Co.	1,000	6,000
Nov. 15.—By *El Monte*=Gaveston:		
Continenta-Mexican Rubber Co.		*70,000
Nov. 15.—By the *Allianca*=Colon:		
Isaac Brandon & Bros.	10,000	
J. Sambrada & Co.	6,000	
L. Johnson & Co.	5,000	
G. Amsinck & Co.	4,000	
De Sola Bros. & Pardo	3,000	
Piza, Nephews & Co.	3,000	
Dumarest Bros.	1,500	32,500
Nov. 15.—By the *Proteus*=New Orleans.		
A. T. Morse & Co.	6,000	
Manhattan Rubber Co.	2,000	
A. D. Rotholz	1,500	
G. Amsinck & Co.	1,000	
Wessels Kulenkampff & Co.	1,000	11,500
Nov. 16.—By *El Dorado*=Galveston:		
Continental-Mexican Rubber Co.		*165,000
Nov. 17.—By the *Manzanillo*=Tampico:		
Ed. Maurer		*85,000
Nov. 18.—By the *Prins Wilhelm*—Colon:		
A. Santos & Co.	7,000	
G. Amsinck & Co.	5,000	
A. Rosenthal & Son	3,500	
West Coast Rubber Co.	1,500	
Roldan & Van Sickle	1,500	
A. Held	1,000	
Isaac Brandon & Bros.	1,000	20,500
Nov. 19.—By the *Comers*=New Orleans:		
A. T. Morse	2,500	
For Europe	2,500	5,000
Nov. 20.—By the *Monterey*=Mexico:		
J. W. Wilson & Co.	2,000	
H. Marquardt & Co.	1,000	
Harburger & Stack	1,000	
American Trading Co.	1,000	5,000

AFRICAN.

		Pounds.
Oct. 22.—By the *Lincoln*=Hamburg:		
Poel & Arnold	47,000	
A. T. Morse & Co.	23,000	
Rubber Trading Co.	17,000	
George A. Alden & Co.	9,000	
W. L. Gough Co.	6,000	
General Rubber Co.	4,000	106,000
Oct. 22.—By the *Monceso*—Lisbon:		
Poel & Arnold		85,000
Oct. 25.—By the *Cedric*=Liverpool:		
Poel & Arnold	13,500	
A. T. Morse & Co.	11,500	25,000
Oct. 27.—By the *Kroonland*=Antwerp:		
A. T. Morse & Co.		11,500
Oct. 28.—By the *Bluecher*=Hamburg:		
Livesey & Co.	11,000	
A. T. Morse & Co.	73,000	
Poel & Arnold	8,000	
W. L. Gough Co.	7,000	
Rubber Trading Co.	11,000	
George A. Alden & Co.	4,500	114,500
Nov. 1.—By the *Baltic*=Liverpool:		
George A. Alden & Co.	37,000	
Livesey & Co.	5,000	
General Rubber Co.	4,500	56,500
Nov. 1.—By the *Lapland*=Antwerp:		
A. T. Morse & Co.	78,000	
W. L. Gough Co.	11,000	
Poel & Arnold	11,500	
George A. Alden & Co.	7,000	107,500
Nov. 3.—By the *Carmania*=Liverpool:		
Poel & Arnold	28,500	
General Rubber Co.	22,500	
Livesey & Co.	20,000	
A. T. Morse & Co.	2,500	
George A. Alden & Co.	3,500	71,000
Nov. 3.— By the *Louisa*=Lisbon:		
W. L. Gough Co.	33,500	
A. T. Morse & Co.	15,000	48,500
Nov. 6.—By the *Campania*=Liverpool:		
Rubber Trading Co.	15,000	
H. A. Gould Co.	5,500	20,500
Nov. 8.—By the *Arabic*=Liverpool:		
George A. Alden & Co.		13,500
Nov. 9.—By the *Finland*=Antwerp:		
Poel & Arnold	5,500	
A. T. Morse & Co.	3,500	
Livesey & Co.	3,500	12,500
Nov. 10.—By the *Irene*=Genoa:		
W. L. Gough Co.		7,000
Nov. 11.—By the *Majestic*=London:		
George A. Alden & Co.		120,000
Nov. 11.—By the *Grant*=Hamburg:		
A. T. Morse & Co.	70,000	
Poel & Arnold	50,000	
George A. Alden & Co.	35,000	
Rubber Trading Co.	9,000	
W. L. Gough Co.	4,500	168,500
Nov. 12.—By the *Lusitania*=Liverpool:		
George A. Alden Co.		34,000
Nov. 15.—By the *Celtic*=Liverpool:		
H. A. Gould Co.	9,000	
Poel & Arnold	5,500	
Livesey & Co.	5,000	
A. T. Morse & Co.	18,000	
Rubber Trading Co.	2,500	40,000
Nov. 17.—By the *Zeeland*=Antwerp:		
A. T. Morse & Co.		10,000
Nov. 17.—By the *Oceanic*=London:		
George A. Alden & Co.		8,000
Nov. 19.—By the *Guyana*=Bordeaux:		
George A. Alden & Co.	33,500	
C. P. dos Santos	5,500	39,000

EAST INDIAN.

[*Denotes plantation rubber.]

		Pounds.
Oct. 25.—By the *Philadelphia*=London:		
Poel & Arnold		*60,000
Oct. 25.—By the *Indrawadi*=Singapore:		
W. L. Gough Co.	6,500	
Heabler & Co.	5,500	12,000
Oct. 25—By the *Welshman*=Singapore:		
George A. Alden & Co.	25,000	
Poel & Arnold	22,500	
O. Isrustein & Co.	13,500	61,000
Oct. 27.—By the *Berlin*=Genoa:		
New York Commercial Co.		*5,000
Nov. 1.—By the *St. Paul*=London:		
Poel & Arnold		*13,500
Nov. 1.—By the *Denmains*=Colombo:		
A. T. Morse & Co.	*13,500	
New York Commercial Co.	*2,500	*16,000
Nov. 3.—By the *Minnewaska*=London:		
General Rubber Co.		*20,000
Nov. 4.—By the *Adriatic*=London:		
New York Commercial Co.		*60,000
Nov. 8.—By the *Arabic*=Liverpool:		
Robinson & Co.		15,500
Nov. 8.—By the *New York*=London:		
A. T. Morse & Co.		*13,500
Nov. 9.—By the *Mesaba*=London:		
General Rubber Co.		*17,000
Nov. 13.—By the *Mattapo*=Colombo:		
New York Commercial Co.		*9,000
Nov. 15.—By the *Menapolis*=London:		
A. T. Morse & Co.	*11,000	
Raw Products Co.	*5,000	*16,000
Nov. 17.—By the *Oceanic*=London:		
New York Commercial Co.	*33,000	
Poel & Arnold	*9,000	*42,000
Nov. 18.—By the *Suttorial*=Colombo:		
A. T. Morse & Co.	*22,500	
New York Commercial Co.	*3,500	*26,000

GUTTA-JELUTONG.

Oct. 25.—By the *Indrawadi*=Singapore:		
Heabler & Co.	450,000	
W. L. Gough Co.	425,000	
Poel & Arnald	220,000	
Littlejohn & Co.	150,000	1,245,000
Oct. 25.—By the *Welshman*=Singapore:		
Heabler & Co.	850,000	
W. L. Gough Co.	325,000	
Poel & Arnold	300,000	
L. C. Hopkins Co.	225,000	1,700,000
Nov. 3.—By the *Carmania*=Liverpool:		
W. L. Gough Co.		22,000
Nov. 8.—By the *Lothian*=Singapore:		
W. L. Gough Co.		110,000
Poel & Arnold	100,000	210,000

GUTTA-PERCHA.

		Pounds.
Oct. 22.—By the *Lincoln*=Hamburg:		
E. Oppenheim		11,000
Oct. 25.—By the *Indrawadi*=Singapore:		
W. L. Gough Co.	22,500	
George A. Alden & Co.	11,000	33,500
Nov. 11.—By the *Grant*=Hamburg:		
E. Oppenheim		10,000

BALATA.

Oct. 27.—By the *Manoa*=Trinidad:		
George A. Alden & Co.	9,000	
G. Amsinck & Co.	2,500	11,500
Nov. 3.—By the *Suriname*=Trinidad:		
G. Amsinck & Co.		7,000
Nov 4.—By the *Guiana*=Demarara:		
George A. Alden & Co.	9,000	
Frame & Co.	10,000	19,000
Nov. 9.—By the *Marowyne*=Trinidad:		
G. Amsinck & Co.	11,000	
J. A. Pauli & Co.	2,500	
Middleton & Co.	2,500	
Frame & Co.	1,000	
Ed Maurer	1,000	18,000

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—OCTOBER.

Imports:	Pounds.	Value.
India-rubber	6,591,715	$7,375,123
Balata	81,044	41,085
Gutta-percha	92,871	16,405
Gutta-jelutong (Pontianak)	3,376,728	110,308
Total	10,142,358	$7,542,921
Exports:		
India-rubber	99,508	$68,549
Reclaimed rubber	65,899	7,794
Rubber scrap, imported	1,635,761	$136,869

BOSTON ARRIVALS.

		Pounds.
Sept. 12.—By the *Cymric*=Liverpool:		
Poel & Arnold (African)		34,000
Sept. 13.—By the *St. Patrick*=Singapore:		
George A. Alden & Co. (Jelutong)	527,000	
Poel & Arnold (Jelutong)	65,000	
Heabler & Co. (Gutta-Percha)	50,000	642,000
Sept. 22.—By the *Michigan*=Liverpool:		
Poel & Arnold (African)		45,000
Sept. 27.—By the *Badenia*=Hamburg:		
Poel & Arnold (African)		11,500

INDIA RUBBER WORLD

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London.

NOVEMBER 2.—The offerings of Plantation at to-day's auction are reported by Lewis & Peat at about 120 tons Straits and Malaya and 25 tons Ceylon. Gow, Wilson & Stanton, Limited, report that a steady demand existed for all descriptions, at prices showing very little change from what prevailed a fortnight ago. To-day's quotations:

Sheet and Biscuit:			
Smoked sheet	9*s.*	4*d.*@9*s.*	8½*d.*
Good to fine sheet	9*s.*	—@9*s.*	1*d.*
Good to fine biscuits	9*s.*	—@9*s.*	1*d.*
Crepe:			
Very pale	9*s.*	1*d.*@9*s.*	3½*d.*
Medium and palish	8*s.*	—@9*s.*	—
Dark and brown	5*s.*	—@7*s.*	10½*d.*
Unwashed Scrap:			
Medium to fine	6*s.*	2*d.*@6*s.*	8¼*d.*
Dark and low	4*s.*	3*d.*@6*s.*	1*d.*

Smoked sheet from Highlands estate established the highest quotation, 9*s.* 8½*d.* [=$2.36.1] the same grade from Vallambrosa realizing 9*s.* 8¼*d.* [=$2.35.6]. A few specially good lots were competed for and sold up to 9*s.* 3½*d.* [=$2.26.6] per pound.

The price of fine hard Pará to-day on the spot is 8*s.* 10*d.* [=$2.04.9].

Liverpool.

WILLIAM WRIGHT & CO. report [November 1]:

Fine Pará.—The market has been active but nervous, and consequently subject to violent fluctuations, but on balance there is a strong undercurrent of strength, and at each sensible reaction in prices, strong buying has taken place on behalf of the principal operators. This has been especially marked for the distant positions, and at about 7*s.* 4*d.* [=$1.76] per pound there are and have been strong buyers right up to the end of the crop, which tends to confirm what we stated in our previous issue—that manufacturers must reckon on a basis of at least 7*s.* [=$1.68] per pound. Receipts, in comparison with demand, especially the American one, continues small, and as there is a considerable amount to be covered in during the next two months, prices of the near positions have advanced 5*d.* per pound within the last week, closing with rather buyers than sellers at quotations.

British Official Statistics.

FOR ten months ending October 31:

INDIA-RUBBER.

	1907.	1908.	1909.
Imports ... *pounds*	63,850,056	52,944,752	63,451,808
Exports ...	33,989,416	31,656,016	36,635,760
Net imports ...	29,860,640	21,288,736	26,816,048

GUTTA-PERCHA.

	1907.	1908.	1909.
Imports ... *pounds*	5,616,240	2,894,640	3,753,792
Exports ...	968,520	464,800	462,560
Net imports ...	4,647,720	2,429,640	3,291,232

Antwerp.

RUBBER STATISTICS FOR OCTOBER.

DETAILS.	1909.	1908.	1907.	1906.	1905.
Stocks, Sept. 30.. *kilos*	397,454	634,161	719,005	566,683	566,735
Arrivals in October..	265,185	554,756	237,963	509,727	555,920
Congo sorts	199,664	487,104	180,366	444,829	391,112
Other sorts	65,521	67,652	57,597	64,898	164,808
Aggregating	662,630	1,208,917	956,968	1,076,410	1,122,655
Sales in October.....	197,808	546,813	233,152	455,329	568,172
Stocks, October 31..	464,831	662,104	723,816	621,081	554,483
Arrivals since Jan. 1..	3,836,338	4,217,919	4,302,317	4,762,232	4,615,168
Congo sorts	2,858,957	3,583,058	3,656,700	3,702,744	3,543,296
Other sorts	977,381	634,861	645,617	1,059,488	1,071,872
Sales since Jan. 1....	3,967,242	4,562,709	4,236,685	4,876,338	4,602,046

RUBBER ARRIVALS FROM THE CONGO.

OCTOBER 18.—By the steamer *Bruxellesville*:

Bunge & Co ... (Société Générale Africane) *kilos*		78,900	
Do ... (Société Abir)		7,800	
Do ... (Comptoir Commercial Congolais)		14,300	
Do ... (Comité Special Katanga)		1,500	
Do ... Société Abir)		7,800	
Do ... (Chemins de fer Grand Lacs)		12,300	
Société Coloniale Anversoise ... (Belge de Haut Congo)		6,100	
Do		4,300	
Do ... (Sud Cameron)		8,900	
L. & W. Van de Velde ... (Cie. du Kasai)		99,000	
Do		3,000	
Charles Dethier ... (American Congo Co.)		3,500	
Société Générale de Commerce		1,600	
Cassart & Henrion		1,300	244,700

NOVEMBER 8.—By the steamer *Albertville:*

Bunge & Co ... (Société Générale Africaine) *kilos*		118,500	
do ... (Société Abir)		3,900	
do ... (Chemins de fer Grands Lacs)		6,800	
do ... (Société Anversoise)		400	
do ... (Comptoir Commercial Congolais)		28,300	
do ... (Comité Special Katanga)		4,100	
do ... (Cie. du Kasai)		76,700	
Société Coloniale Anversoise ... (Belge du Haut Congo)		400	
do ... (Cie. du Lomami)		7,400	
do		5,900	
Société Equatoriale Congolaise		250	
M. S. Cols		850	
L. & W. Van de Velde		4,200	
Congo Trading Co		325	
Charles Dethler ... (American Congo Co.)		2,500	260,625

LITTLE BUT GOOD.—The Reading Rubber Stamp Works (Reading, Pennsylvania) recently received a check for two cents from a local firm in payment of a balance on an account. The check is kept as a curiosity, says a local paper, and is prized far above its actual value.

Small Advertisement Department.

SITUATIONS WANTED.

WANTED.—An executive position of responsibility with rubber manufacturing concern in Boston or vicinity by young man 29 years of age, married, and who has had 10 years' practical experience from that of bookkeeper to office manager and treasurer of large corporation in similar line. Have also had 2 years' factory experience. I have an exceptionally good reclaiming process, suitable for all kinds of mechanical rubber goods, which I should be willing to demonstrate and give to the right parties. A position of permanency with opportunity of advancement as ability may merit is the most important consideration. A 1 references as to character, ability, etc. Address RECLAIMING, care of THE INDIA RUBBER WORLD. (434)

FACTORY MANAGER OR GENERAL SUPERINTENDENT.—I have severed my connection with one of the largest concerns in America making a varied line of goods and am seeking a new one. Have practical training and good executive ability. Can handle help. Up-to-date methods. Have made a study of machinery and labor-saving devices. Up in cost and piece work systems, production reports, etc. Know how to push production and keep the expenses and overheads down. Formulas and specifications up to date and well recorded and indexed. Heats and cures all established and requires no experimenting to get immediate results. Address QUALITY, care of THE INDIA RUBBER WORLD. (435)

SALESMAN.—Position wanted by experienced salesman with mechanical rubber house. Best references. Address BOX NO. 81, care of THE INDIA RUBBER WORLD. (436)

SALES, BRANCH OR DEPARTMENT MANAGER.—An able man of 20 years' experience in marketing a large product would like to correspond with mechanical, tire, or drug sundry concern who will appreciate energy, experience, good judgment and executive ability. Is in touch with prevailing conditions. Has practical experience. Can handle salesmen and knows how to get results. Address PUSHER, care of THE INDIA RUBBER WORLD. (437)

WANTED.—Position as assistant to manager with mechanical rubber house by experienced man. Best references. Address BOX NO. 82, care of THE INDIA RUBBER WORLD. (438)

POSITION WANTED by practical rubber man with chemical education and 18 years' experience in compounding and manufacturing shoes, tires, druggists' sundries, etc. Address BOX NO. 83, care of THE INDIA RUBBER WORLD. (439)

SUPERINTENDENT.—Wanted, by fully equipped and experienced auto and solid tire superintendent, position with enterprising concern. Best of references. Address BOX NO. 84, care of THE INDIA RUBBER WORLD. (440)

WANTED by a young German chemist and superintendent, a position with a mechanical rubber goods factory, salary being no object, as he is willing to work hard to prove his usefulness and incidentally help his English. Address BOX NO. 85, care of THE INDIA RUBBER WORLD. (441)

SALESMAN, 25 years of age, with 5 years' experience selling rubber goods, desires local or travelling position. Can furnish excellent references. Address S. S., care of THE INDIA RUBBER WORLD. (442)

POSITION WANTED as designer or pattern cutter on men's and women's rubberized garments. Address BOX NO. 88, care of THE INDIA RUBBER WORLD. (451)

ABLE EXECUTIVE, of wide practical training and experienced selling ability, seeks position to take full charge or any part. Address BOX NO. 75, care of THE INDIA RUBBER WORLD. (423)

SITUATIONS OPEN.

WANTED.—Chemist for Canadian factory engaged in manufacturing a general line of mechanical goods. One capable of installing laboratory and getting results. State age, experience and salary expected. Address BOX NO. 86, care of THE INDIA RUBBER WORLD. (443)

WANTED.—Foreman in mold department. Capable and anxious to advance. State experience and expectations. Address J. H., care of THE INDIA RUBBER WORLD. (444)

RUBBER SUBSTITUTES.—Important European factory wants agents for the United States and Canada. Address P. F., care of THE INDIA RUBBER WORLD. (353)

OPPORTUNITY.—The proprietor of a newly patented product for use in rubber compounds, the merit of which has been fully established, desires the services of a capable rubber compounder to assist in demonstrating the product to important manufacturers, with a view to his continued employment by the said proprietor in case the demonstrations shall prove satisfactory. Address COMPOUNDS, care of THE INDIA RUBBER WORLD. (450)

BUSINESS OPPORTUNITIES.

TO RENT with power, rubber factory well equipped with washers, grinders, calenders, hydraulic presses, vulcanizers, etc. Thirty minutes from New York city. Address RUBBER FACTORY, care of THE INDIA RUBBER WORLD. (448)

RUBBER LANDS.

The Orizaba Rubber Plantation Co., operating in the state of Chiapas, Mexico, own and offer for sale selected rubber lands adjoining their own producing plantation, in tracts of 1,000 to 10,000 acres. Contracts will be made if desired to improve the same or furnish selected seed in large quantities from their own trees. The cultivation of Castilloa rubber in this particular district is an unquestioned financial success. Address J. B. SANBORN, president, No. 324 Dearborn street, Chicago, Ill, U. S. A. (449)

FOR SALE.

FOR SALE.—1,200 acres of first-class rubber land in ideal locality, with 15,000 trees on it, for $10,000 gold. Owner would also join partner or company for development. Address CHIAPAS, care of The India Rubber World. (391)

FOR SALE.—Factory Rubber Waste from Rubber Cement; cleaned at a low price; sample sent free. UNITED STATES WASTE RUBBER CO., No. 487 North Warren Avenue, Brockton, Mass.

FOR SALE.—Stock progressive rubber concern, 900 par, offered for $600 cash. Immediate acceptance. Address VENANGO, care of THE INDIA RUBBER WORLD. (446)

FOR SALE.—Factory conveniently located, 20 minutes from New York city, on Pennsylvania Railroad. Brick buildings, with steam engine and boiler. Spare ground for the erection of additional buildings, if required. Address Box No. 87, care of THE INDIA RUBBER WORLD. (447)

RUBBER MILL MACHINERY FOR SALE.

FOR SALE.—Two (2) large heavy use engines. A large line of 14 x 40 and 16 x 40 grinders and sheeters. Several washers of all sizes. One (1) combination 18 x 44 chilled iron smooth roll calender. Large and small Boomer & Boschert presses. A large lot of hydraulic presses. Several hand screw presses. Bicycle tire molds. Vulcanizers. Pumps. Boilers and other miscellaneous rubber mill machinery practically as good as new will be sold cheap for cash. Apply to PHILIP MCGROBY, Trenton, N. J.

RUBBER MACHINERY We carry a large stock and it will pay you to write us if you want to buy or sell. Factories dismantled.

W. C. COLEMAN CO., 161 Summer Street, Boston, Mass

FOR SALE.—Hand Hydraulic Pump, W. S. Co., also 2000-lb. Hy. Gauge. Address J. H., care of THE INDIA RUBBER WORLD. (445)

Rubber Concessions

in any part of the tropics examined and valued.

Established rubber plantations reported upon.

Expert advice given upon the suitability of lands for the cultivation of rubber, cacao, etc.

Estimates furnished for the opening of estates.

Expert advice given on the development of established or projected plantations.

JAMES C. HARVEY,

SANTA LUCRETIA

Estato de Vera Cruz

Mexico

Mention The India Rubber World when you write.

BUYERS' DIRECTORY OF THE RUBBER TRADE.

Classified List of Manufacturers and Dealers in India-Rubber Goods and Rubber Manufacturers' Supplies.

INDEX TO ADVERTISERS

MECHANICAL RUBBER GOODS.

Belting.
Diaphragms.
Gaskets.
Hose (Fire, Garden, Steam).
Mats and Matting.
Mould Work.
Packing.
Tubing.
Valves.
Washers.

Mechanical Goods Generally.

Acme Rubber Mfg. Co., Trenton.
Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co.
Bowers Rubber Co., San Francisco, Cal.
Canadian Rubber Co. of Montreal.
H. O. Canfield Co., Bridgeport, Conn.
Chicago Rubber Works, Chicago.
Cincinnati Rubber Mfg. Co., Cincinnati.
Cleveland Rubber Co., Cleveland, O.
Continental Caoutchouc & Gutta Percha Co., Hanover, Germany.
Continental Rubber Works, Erie, Pa.
The Dermatine Co., London.
Dunlop Tire & Rubber Goods Co., Toronto.
Empire Rubber Mfg. Co., Trenton, N. J.
Eureka Fire Hose Mfg. Co., New York.
Federal Rubber Co., Milwaukee, Wis.

Mechanical Goods—General.—Continued.

B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
Gutta Percha & Rubber Mfg. Co., Toronto.
Home Rubber Co., Trenton, N. J.
The Indiana Rubber and Insulated Wire Co., Jonesboro, Ind.
Manhattan Rubber Mfg. Co., New York.
Massachusetts Chemical Co., Walpole, Mass.
Mattson Rubber Co., Lodi, N. J.
Mechanical Rubber Co., New York.
Morgan & Wright, Detroit, Mich.
National India-Rubber Co., Bristol, R. I.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
New York Belting & Packing Co., N. Y.
New York Rubber Co., New York.
Peerless Rubber Mfg. Co., New York.
Pirelli & Co., Milan, Italy.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston-New York.
Jos. Stokes Rubber Co., Trenton, N. J.
Thermoid Rubber Co., Trenton, N. J.
Voorhees Rubber Mfg. Co., Jersey City.
Western Rubber Co., Goshen, Ind.

Air Brake Hose.

Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Acme Rubber Mfg. Co., Trenton.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.

Air Brake Hose—Continued.

Home Rubber Co., Trenton, N. J.
N. J. Car Spring & Rubber Co., Jersey City.
New York Belting & Packing Co., N. Y.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston-New York.
Voorhees Rubber Mfg. Co., Jersey City.

Belting (Canvas).

Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Eureka Fire Hose Mfg. Co., New York.
The Gutta Percha & Rubber Mfg. Co. of Toronto, Ltd.
Peerless Rubber Mfg. Co., New York.
Revere Rubber Co., Boston-New York.

Billiard Cushions.

Boston Belting Co., Boston.
Canadian Rubber Co. of Montreal.
Cincinnati R. M. Co., Cincinnati, O.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
Manhattan Rubber Mfg. Co., New York.
Mattson Rubber Co., Lodi, N. J.
New York Belting & Packing Co., Ltd.
New York Rubber Co., New York.
Revere Rubber Co., Boston-New York.

Blankets—Printers'.

Peerless Rubber Mfg. Co., New York.
Boston Belting Co., Boston.
Canadian Rubber Co. of Montreal.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
Hodgman Rubber Co., New York.

Blankets—Printers'.—Continued.

Gustave Kush, New York.
Revere Rubber Co., Boston-New York.
Voorhees Mfg. Co., Jersey City.

Brass Stair Nosing.

F. R. Howell Brass Works, Phila., Pa.

Brushes.

Boston Woven Hose & Rubber Co.
C. J. Bailey & Co., Boston.

Buffers.

Boston Belting Co., Boston-New York.
Canadian Rubber Co. of Montreal.
Cincinnati R. M. Co., Cincinnati, O.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
The Gutta Percha & Rubber Mfg. Co. of Toronto, Ltd.
Massachusetts Chemical Co., Walpole, Mass.
Mattson Rubber Co., Lodi, N. J.
National India Rubber Co., Bristol, R. I
Revere Rubber Co., Boston-New York.
Voorhees Rub. Mfg. Co., Jersey City.

Card Cloths.

Canadian Rubber Co. of Montreal.
Mechanical Fabric Co., Providence, R. I.

Carriage Mats.

Continental Rubber Works, Erie, Pa.
Acme Rubber Mfg. Co., Trenton.
Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
The Gutta Percha & Rubber Mfg. Co. of Toronto, Ltd.

RUBBER BUYERS' DIRECTORY—Continued.

Carriage Mats.—Continued.

Home Rubber Co., Trenton, N. J.
Massachusetts Chemical Co., Walpole, Mass.
National India Rubber Co., Bristol, R. I.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Peerless Rubber Mfg. Co., New York.
Revere Rubber Co., Boston—New York.
Voorhees Rubber Mfg. Co., Jersey City.

Cord (Pure Rubber).

Acme Rubber Mfg. Co., Trenton.
Boston Belting Co., Boston—New York.
Boston Woven Hose & Rubber Co.
Cleveland Rubber Co., Cleveland, O.
Continental Rubber Works, Erie, Pa.
Davol Rubber Co., Providence, R. I.
Empire Rubber Mfg. Co., Trenton, N. J.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Manhattan Rubber Mfg. Co., New York.
Mattson Rubber Co., Lodi, N. J.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston—New York.
Voorhees Rubber Mfg. Co., Jersey City.

Deckle Straps.

Boston Belting Co., Boston.
Canadian Rubber Co. of Montreal.
B. F. Goodrich Co., Akron, O.
Mechanical Rubber Co., Chicago.
New York Belting & Packing Co., N. Y.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston—New York.

Door Springs.

Hodgman Rubber Co., New York.

Dredging Sleeves.

Acme Rubber Mfg. Co., Trenton.
Boston Belting Co., Boston—New York.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Cincinnati R. M. Co., Cincinnati, O.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Home Rubber Co., Trenton, N. J.
Manhattan Rubber Mfg. Co., New York.
N. J. Car Spring & Rubber Co., Jersey City.
New York Belting & Packing Co., N. Y.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston—New York.
Voorhees Rub. Mfg. Co., Jersey City.

Force Cups.

The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Hodgman Rubber Co., New York.
Mattson Rubber Co., Lodi, N. J.
National India Rubber Co., Bristol, R. I.

Fruit Jar Rings.

Acme Rubber Mfg. Co., Trenton.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.
Cleveland Rubber Co., Cleveland, O.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
Empire Rubber Mfg. Co., Trenton, N. J.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Manhattan Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, O.
Rubber Products Co., Barberton, O.
New York Belting & Packing Co., N. Y.

Fuller Balls.

Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
Jenkins Bros., New York.
Manhattan Rubber Mfg. Co., New York.
Mattson Rubber Co., Lodi, N. J.
National India Rubber Co., Bristol, R. I.
N. J. Car Spring & Rubber Co., Jersey City.
New York Belting & Packing Co., N. Y.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, O.
Rubber Products Co., Barberton, O.

Gage Glass Washers.

Boston Belting Co., Boston, Mass.
Canadian Rubber Co. of Montreal.
Cincinnati R. M. Co., Cincinnati, O.
Cleveland Rubber Co., Cleveland, O.
Continental Rubber Works, Erie, Pa.
Empire Rubber Mfg. Co., Trenton, N. J.
B. F. Goodrich Co., Akron, O.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Home Rubber Co., Trenton, N. J.
Jenkins Bros., New York.
Manhattan Rubber Mfg. Co., New York.
Mattson Rubber Co., Lodi, N. J.
Mechanical Rubber Co., Chicago, Ill.
National India Rubber Co., Bristol, R. I.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
New York Belting & Packing Co., N. Y.
New York Rubber Co., New York.
Revere Rubber Co., Boston, Mass.
Jos. Stokes Rubber Co., Trenton, N. J.
Voorhees Rubber Mfg. Co., Jersey City, N. J.

Gas-Bags (Rubber).

Canadian Rubber Co. of Montreal.
Cleveland Rubber Co., Cleveland, O.
Davidson Rubber Co., Boston.
Davol Rubber Co., Providence, R. I.
B. F. Goodrich Co., Akron, O.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
National India Rubber Co., Bristol, R. I.
Peerless Rubber Mfg. Co., New York.
Tyer Rubber Co., Andover, Mass.
Voorhees Rubber Mfg. Co., Jersey City.

Gasket Tubing.

Boston Belting Co., Boston—New York.
Canadian Rubber Co. of Montreal.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Jenkins Bros., New York.
Manhattan Rubber Mfg. Co., New York.
National India Rubber Co., Bristol, R. I.
New Jersey Car Spring & Rubber Co.
Revere Rubber Co., Boston—New York.
Voorhees Rub. Mfg. Co., Jersey City.

Grain Drill Tubes.

Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Manhattan Rubber Mfg. Co., New York.

Hat Bags.

Boston Belting Co., Boston.
Canadian Rubber Co. of Montreal.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
Home Rubber Co., Trenton, N. J.
Manhattan Rubber Mfg. Co., New York.
Mattson Rubber Co., Lodi, N. J.
Mechanical Rubber Co., Chicago.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
New York Belting & Packing Co., N. Y.
New York Rubber Co., New York.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston—New York.
Voorhees Rub. Mfg. Co., Jersey City.

Horse Shoe Pads.

Canadian Rubber Co. of Montreal.
Cincinnati R. M. Co., Cincinnati, O.
Continental Rubber Works, Erie, Pa.
Home Rubber Co., Trenton, N. J.
Manhattan Rubber Mfg. Co., New York.
Peerless Rubber Mfg. Co., New York.
Plymouth Rubber Co., Stoughton, Mass.
Revere Rubber Co., Boston—New York.
Voorhees Rubber Mfg. Co., Jersey City.

Hose—Wire Wound.

Acme Rubber Mfg. Co., Trenton.
Boston Belting Co., Boston—New York.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Manhattan Rubber Mfg. Co., New York.
National India Rubber Co., Bristol, R. I.
N. J. Car Spring & Rubber Co., Jersey City.
New York Belting & Packing Co., N. Y.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston—New York.
Voorhees Rubber Mfg. Co., Jersey City.

Hose Core.

Alderfer Crate Co., Sharon Center, O.

Hose Pipes, Nozzles, Couplings and Fittings.

W. D. Allen Mfg. Co., Chicago.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Eureka Fire Hose Mfg. Co., New York.
F. R. Howell Brass Works, Phila., Pa.
Revere Rubber Co., Boston.
A. Schrader's Son, Inc., New York.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.

Hose Linings.

Acme Rubber Mfg. Co., Trenton.
Boston Belting Co., Boston—New York.
Boston Woven Hose & Rubber Co.
Empire Rubber Mfg. Co., Trenton, N. J.
B. F. Goodrich Co., Akron, O.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Manhattan Rubber Mfg. Co., New York.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Peerless Rubber Mfg. Co., New York.
Revere Rubber Co., Boston—New York.
Voorhees Rub. Mfg. Co., Jersey City.

Hose Racks and Reels.

W. D. Allen Mfg. Co., Chicago.
Gutta Percha & Rubber Mfg. Co., N. Y.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
New York Belting & Packing Co., N. Y.
Wirt & Knox Mfg. Co., Philadelphia.

Hose—Rubber Lined.

Cotton and Linen.

Acme Rubber Mfg. Co., Trenton.
Boston Belting Co., Boston—New York.
Boston Woven Hose & Rubber Co.
Gutta Percha & Rubber Mfg. Co., N. Y.
Canadian Rubber Co. of Montreal.
Cleveland Rubber Co., Cleveland, O.
Empire Rubber Mfg. Co., Trenton, N. J.
Eureka Fire Hose Mfg. Co., New York.
Fabric Fire Hose Co., New York.
B. F. Godorich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
Gutta Percha & Rubber Mfg. Co. of Toronto.
Home Rubber Co., Trenton, N. J.
Manhattan Rubber Mfg. Co., New York.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
New York Belting & Packing Co., N. Y.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston—New York.
Jos. Stokes Rubber Co., Trenton, N. J.
Voorhees Rubber Mfg. Co., Jersey City.

Hose—Submarine.

Acme Rubber Mfg. Co., Trenton.
Boston Belting Co., Boston—New York.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Manhattan Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston—New York.
A. Schrader's Son, Inc., New York.
Voorhees Rub. Mfg. Co., Jersey City.

Hose Bands, Straps & Menders.

W. D. Allen Mfg. Co., Chicago.
Boston Woven Hove & Rubber Co.
F. R. Howell Brass Works, Phila., Pa.
A. Schrader's Son, Inc., N. Y.
William Yerdon, Fort Plain, N. Y.

Lawn-Hose Supporters.

W. D. Allen Mfg. Co., Chicago.
C. J. Bailey & Co., Boston.

Lawn Sprinklers.

Boston Woven Hose & Rubber Co.
Canadian Rubber Co., of Montreal.

Mallets (Rubber).

Boston Belting Co., Boston—New York.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Manhattan Rubber Mfg. Co., New York.
National India Rubber Co., Bristol, R. I.
New York Belting & Packing Co., N. Y.
Peerless Rubber Mfg. Co., New York.
Revere Rubber Co., Boston—New York.

Mould Work.

(See Mechanical Rubber Goods.)

H. O. Canfield Co., Bridgeport, Ct.
Canton Rubber Co., Canton, O.
Cincinnati R. M. Co., Cincinnati, O.
Davidson Rubber Co., Boston.
Davol Rubber Co., Providence, R. I.
Faultless Rubber Co., Akron, O.
Hodgman Rubber Co., New York.
Massachusetts Chemical Co., Walpole, Mass.
Mattson Rubber Co., Lodi, N. J.
Morgan & Wright, Detroit, Mich.
Plymouth Rubber Co., Stoughton, Mass.
Tyer Rubber Co., Andover, Mass.

Oil Well Supplies.

Boston Belting Co., Boston—New York.
Boston Woven Hose & Rubber Co.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Home Rubber Co., Trenton, N. J.
Manhattan Rubber Mfg. Co., New York.
N. J. Car Spring & Rubber Co., Jersey City.
New York Belting & Packing Co., N. Y.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston—Pittsburgh.
Voorhees Rubber Mfg. Co., Jersey City.

Packing.

(See Mechanical Rubber Goods.)

Jenkins Bros., New York.
Mattson Rubber Co., Lodi, N. J.

Paper Machine Rollers.

Boston Belting Co., Boston—New York.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
Manhattan Rubber Mfg. Co., New York.
New York Belting & Packing Co., N. Y.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston—New York.
Vorhees Rubber Mfg. Co., Jersey City.

Plumbers' Supplies.

Canadian Rubber Co. of Montreal.
H. O. Canfield Co., Bridgeport, Ct.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Manhattan Rubber Mfg. Co., New York.
Mattson Rubber Co., Lodi, N. J.
Republic Rubber Co., Youngstown, O.
Voorhees Rub. Mfg. Co., Jersey City.
Western Rubber Works, Goshen, Ind.

Pump Valves.

(See Mechanical Rubber Goods.)

Jenkins Bros., New York.
Mattson Rubber Co., Lodi, N. J.
Massachusetts Chemical Co., Walpole, Mass.

Rock Drill Couplings.

F. R. Howell Brass Works, Phila., Pa.

Rolls—Rubber Covered.

Acme Rubber Mfg. Co., Trenton, N. J.
Boston Belting Co., Boston.
Canadian Rubber Co. of Montreal.
Cincinnati R. M. Co., Cincinnati, O.
Cleveland Rubber Co., Cleveland, O.
Continental Rubber Works, Erie, Pa.
Empire Rubber Mfg. Co., Trenton, N. J.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Home Rubber Co., Trenton, N. J.
Manhattan Rubber Mfg. Co., New York.
Mattson Rubber Co., Lodi, N. J.
Mechanical Rubber Co., Chicago.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
New York Belting & Packing Co., N. Y.
Peerless Rubber Mfg. Co., New York.
Plymouth Rubber Co., Stoughton, Mass.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston—New York.
Voorhees Rub. Mfg. Co., Jersey City.

Sewing Machine Rubbers.

Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.

Springs—Rubber.

Acme Rubber Mfg. Co., Trenton.
Boston Belting Co., Boston—New York.
Canadian Rubber Co. of Montreal.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Manhattan Rubber Mfg. Co., New York.
Massachusetts Chemical Co., Walpole, Mass.
Mattson Rubber Co., Lodi, N. J.
National India Rubber Co., Bristol, R. I.
N. J. Car Spring & Rubber Co., Jersey City.
New York Belting & Packing Co., N. Y.
Peerless Rubber Mfg. Co., New York.
Plymouth Rubber Co., Stoughton, Mass.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston—New York.
Voorhees Rubber Mfg. Co., Jersey City.

Stair Treads.

Acme Rubber Mfg. Co., Trenton.
Boston Belting Co., Boston—New York.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co., of Montreal.
Cincinnati R. M. Co., Cincinnati, O.
Cleveland Rubber Co., Cleveland, O.
Continental Rubber Works, Erie, Pa.
Empire Rubber Mfg. Co., Trenton, N. J.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Home Rubber Co., Trenton, N. J.
Manhattan Rubber Mfg. Co., New York.
Massachusetts Chemical Co., Walpole, Mass.

RUBBER BUYERS' DIRECTORY—Continued.

Stair Treads—Continued.

National India Rubber Co., Bristol, R. I.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
New York Belting & Packing Co., N. Y.
New York Rubber Co., New York.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston-New York.
Voorhees Rubber Mfg. Co., Jersey City.

Thread.

B. F. Goodrich Co., Akron, O.
Mechanical Fabric Co., Providence, R. I.
Revere Rubber Co., Boston-New York.

Tiling.

American Hard Rubber Co., N. Y.
Canadian Rubber Co. of Montreal, Ltd.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co., N. Y.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Manhattan Rubber Mfg. Co., New York.
N. J. Car Spring & Rubber Co., Jersey City.
New York Belting & Packing Co., N. Y.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, O.
Voorhees Rubber Mfg. Co., Jersey City.

Tubing.

(See Mechanical Rubber Goods.)
American Hard Rubber Co., New York.
Boston W. H. & R. Co., Boston.
Cincinnati R. M. Co., Cincinnati, O.
Davidson Rubber Co., Boston.
Davol Rubber Co., Providence, R. I.
Mattson Rubber Co., Lodi, N. J.
Plymouth Rubber Co., Stoughton, Mass.
Rubber Products Co., Barberton, O.
Star Rubber Co., Akron, O.
Tyer Rubber Co., Andover, Mass.
Voorhees Rub. Mfg. Co., Jersey City.

Valve Balls.

Boston Belting Co., Boston.
Cleveland Rubber Co., Cleveland, O.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
Jenkins Bros., New York.
Manhattan Rubber Mfg. Co., New York.
Mattson Rubber Co., Lodi, N. J.
Mechanical Rubber Co., Chicago.
National India Rubber Co., Bristol, R. I.
New York Belting & Packing Co., N. Y.
New York Rubber Co., New York.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, O.
Revere Rubber Co., Boston-New York.

Valve Discs.

American Hard Rubber Co., New York.
Boston Belting Co., Boston-New York.
Cincinnati R. M. Co., Cincinnati, O.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
Jenkins Bros., N. Y.
Manhattan Rubber Mfg. Co., New York.
Mattson Rubber Co., Lodi, N. J.
New York Belting & Packing Co., N. Y.
Peerless Rubber Mfg. Co., New York.
Republic Rubber Co., Youngstown, O.
Western Rubber Works, Goshen, Ind.

Valves.

(See Mechanical Rubber Goods.)
Jenkins Bros. New York-Chicago.
Mattson Rubber Co., Lodi, N. J.

Vulcanite Emery Wheels.

Manhattan Rubber Mfg. Co., Passaic, N. J.
New York Belting & Packing Co., Ltd., New York.

Wringer Rolls.

Canadian Rubber Co., of Montreal.
Cincinnati R. M. Co., Cincinnati, O.
Cleveland Rubber Co., Cleveland, O.
Continental Rubber Works, Erie, Pa.
B. F. Goodrich Co., Akron, O.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Home Rubber Co., Trenton, N. J.
Manhattan Rubber Mfg. Co., New York.
Mattson Rubber Co., Lodi, N. J.
New York Belting & Packing Co., N. Y.
Republic Rubber Co., Youngstown, O.

DRUGGISTS' AND STATIONERS' SUNDRIES.

Atomizers. Nipples.
Bandages. Syringes.
Bulbs. Water Bottles.
Druggists' Sundries, Generally.

American Hard Rubber Co., New York.
C. J. Bailey & Co., Boston.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Canton Rubber Co., Canton, O.
Cleveland Rubber Co., Cleveland, O.
Davidson Rubber Co., Boston.
Davol Rubber Co., Providence, R. I.
Faultless Rubber Co., Akron, O.
B. F. Goodrich Co., Akron, O.
Hodgman Rubber Co., New York.
Luzerne Rubber Co., Trenton, N. J.
Mass. Chemical Co., Walpole, Mass.
National India Rubber Co., Bristol, R. I.
Parker, Stearns & Co., N. Y.
Pirelli & Co., Milan, Italy.
Rubber Products Co., Barberton, O.
Seamless Rubber Co., New Haven, Ct.
Star Rubber Co., Akron, O.
Tyer Rubber Co., Andover, Mass.
Walpole Rubber Co., Granby, P. Q.
Walpole Rubber Works, Walpole, Mass.
Western Specialty Mfg. Co., N. Y.

Balls, Dolls and Toys.

New York Rubber Co., New York.

Combination Fountain Syringe and Hot Water Bottle Fixtures.

A. Schrader's Son, Inc., N. Y.

Combs.

American Hard Rubber Co., New York.

Elastic Bands.

Canadian Rubber Co. of Montreal.
Cleveland Rubber Co., Cleveland, O.
Davol Rubber Co., Providence, R. I.
B. F. Goodrich Co., Akron, O.
Hodgman Rubber Co., New York-Boston.
Tyer Rubber Co., Andover, Mass.

Electrician Gloves.

Star Rubber Co., Akron, O.

Erasive Rubbers.

Davidson Rubber Co., Boston.
B. F. Goodrich Co., Akron, O.

Finger Cots.

Canton Rubber Co. Canton, O.
Cleveland Rubber Co., Cleveland, O.
Davidson Rubber Co., Boston.
Davol Rubber Co., Providence.
Faultless Rubber Mfg. Co., Akron, O.
B. F. Goodrich Co., Akron, O.
The Rubber Products Co., Barberton, O.
Star Rubber Co., Akron, O.

Gloves.

Canadian Rubber Co. of Montreal.
Canton Rubber Co., Canton, O.
Davol Rubber Co., Providence, R. I.
Faultless Rubber Co., Akron, O.
B. F. Goodrich Co., Akron, O.
National India Rubber Co., Bristol, R. I.
Rubber Products Co., Barberton, O.
Star Rubber Co., Akron, O.

Hard Rubber Goods.

American Hard Rubber Co., New York.
Canadian Rubber Co. of Montreal.
Davidson Rubber Co., Boston.
H. O. Canfield Co., Bridgeport, Ct.
Davol Rubber Co., Providence, R. I.
Luzerne Rubber Co., Trenton, N. J.
Stokes Rubber Co., Joseph, Trenton, N. J.
Tyer Rubber Co., Andover, Mass.

Hospital Sheetings.

Cleveland Rubber Co., Cleveland, O.
Davol Rubber Co., Providence, R. I.
B. F. Goodrich Co., Akron, O.
Hodgman Rubber Co., New York.
National India Rubber Co., Bristol, R. I.
Plymouth Rubber Co., Stoughton, Mass.
Tyer Rubber Co., Andover, Mass.

Hot Water Bottle Stoppples.

A. Schrader's Son, Inc., N. Y.

Ice Bags and Ice Caps.

Canton Rubber Co., Canton, O.
Cleveland Rubber Co., Cleveland, O.
Davidson Rubber Co., Boston.
Davol Rubber Co., Providence.
Faultless Rubber Co., Akron, O.
B. F. Goodrich Co., Akron, O.
National India Rubber Co., Bristol, R. I.
The Rubber Products Co., Barberton, O.
Star Rubber Co., Akron, O.
Tyer Rubber Co., Andover, Mass.

Life Preservers.

Davol Rubber Co., Providence.
Hodgman Rubber Co., New York.
National India Rubber Co., Bristol, R. I.

Shower Bath Sprinklers.

Davol Rubber Co., Providence.
A. Schrader's Son, Inc., New York.

Sponges (Rubber).

Faultless Rubber Co., Ashland, O.
N. Tire Rubber Sponge Co., Chicago.

Stationers' Sundries.

American Hard Rubber Co., New York.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.
Cleveland Rubber Co., Cleveland, O.
Davidson Rubber Co., Boston.
Davol Rubber Co., Providence, R. I.
B. F. Goodrich Co., Akron, O.
Hodgman Rubber Co., New York-Boston.
Seamless Rubber Co., New Haven, Ct.
Tyer Rubber Co., Andover, Mass.

Stopples (Metal).

A. Schrader's Son, Inc., N. Y.

Stopples (Rubber).

Cleveland Rubber Co., Cleveland, O.
Davol Rubber Co., Providence, R. I.
Hodgman Rubber Co., New York.
Manhattan Rubber Mfg. Co., New York.
National India Rubber Co., Bristol, R. I.
New York Belting & Packing Co., N. Y.
Tyer Rubber Co., Andover, Mass.

Throat Bags.

Cleveland Rubber Co., Cleveland, O.
Davidson Rubber Co., Boston.
Davol Rubber Co., Providence, R. I.
B. F. Goodrich Co., Akron, O.
National India Rubber Co., Bristol, R. I.
Tyer Rubber Co., Andover, Mass.

Tobacco Pouches.

Canadian Rubber Co. of Montreal.
Davidson Rubber Co., Boston.
Davol Rubber Co., Providence.
Faultless Rubber Co., Akron, O.
B. F. Goodrich Co., Akron, O.
The Rubber Products Co., Barberton, O.
Tyer Rubber Co., Andover, Mass.

MACKINTOSHED AND SURFACE GOODS.

Air Goods (Rubber).

Canadian Rubber Co. of Montreal.
Cleveland Rubber Co., Cleveland, O.
Davidson Rubber Co., Boston.
Davol Rubber Co., Providence, R. I.
B. F. Goodrich Co., Akron, O.
Hodgman Rubber Co., New York.
New York Rubber Co., New York.
National India Rubber Co., Providence.
Rubber Products Co., Barberton, O.
Tyer Rubber Co., Andover, Mass.

Air Mattresses.

Canadian Rubber Co. of Montreal.
Mechanical Fabric Co., Providence, R. I.
National India Rubber Co., Bristol, R. I.

Barbers' Bibs.

Cleveland Rubber Co., Cleveland, O.
Davol Rubber Co., Providence, R. I.
Tyer Rubber Co., Andover, Mass.

Bathing Caps.

Davol Rubber Co., Providence, R. I.
B. F. Goodrich Co., Akron, O.
Rubber Products Co., Barberton, O.

Bellows Cloths.

Boston Rubber Co., Boston.
Cleveland Rubber Co., Cleveland, O.
Hodgman Rubber Co., New York.

Calendering.

Plymouth Rubber Co., Stoughton, Mass.

Carriage Ducks and Drills.

Acme Rubber Mfg. Co., Trenton, N. J.
Cleveland Rubber Co., Cleveland, O.
Empire Rubber Mfg. Co., Trenton, N. J.
Gutta Percha & Rubber Mfg. Co., Toronto.
National India Rubber Co., Bristol, R. I.

Clothing.

Canadian Rubber Co. of Montreal.
Cleveland Rubber Co., Cleveland, O.
Gutta Percha & Rubber Mfg. Co. of Toronto.
Hodgman Rubber Co., New York.
National India Rubber Co., Bristol, R. I.
Pirelli & Co., Milan, Italy.

Cravenette.

Cravenette Co., Ltd.

Diving Apparatus.

A. Schrader's Son, Inc., New York.
Hodgman Rubber Co., New York.

Horse Covers.

Hodgman Rubber Co., New York.
National India Rubber Co., Bristol, R.I.

Leggings.

Cleveland Rubber Co., Cleveland, O.
Hodgman Rubber Co., New York.
National India Rubber Co., Bristol, R. I.

Mackintoshes.

(See Clothing.)

Proofing.

Canadian Rubber Co of Montreal.
Plymouth Rubber Co., Stoughton, Mass.

Rain Coats.

Cravenette Co., Ltd.

Rubber Coated Cloths.

Mechanical Fabric Co., Providence, R. I.

RUBBER FOOTWEAR.

Boots and Shoes.

American Rubber Co., Boston.
Boston Rubber Shoe Co., Boston.
Canadian Rubber Co. of Montreal.
L. Candee & Co., New Haven, Conn.
B. F. Goodrich Co., Akron, O.
Gutta Percha & Rubber Mfg. Co. of Toronto.
Hood Rubber Co., Boston.
Lycoming Rubber Co., Williamsport, Pa.
Meyer Rubber Co., New York.
National India Rubber Co., Boston.
United States Rubber Co., New York.
Wales-Goodyear Rubber Co., Boston.
Woonsocket Rubber Co., Providence.

Heels and Soles.

Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Continental Caoutchouc & Gutta Percha Co., Hanover.
Foster Rubber Co., Boston.
The Gutta Percha & Rubber Mfg. Co. of Toronto, Ltd.
Massachusetts Chemical Co., Walpole, Mass.
Plymouth Rubber Co., Stoughton, Mass.
Western Rubber Works, Goshen, Ind.

Tennis Shoes.

American Rubber Co., Boston.
Boston Rubber Shoe Co., Boston.
The Gutta Percha & Rubber Mfg. Co. of Toronto, Ltd.
National India Rubber Co., Providence.
United States Rubber Co., New York.

Wading Pants.

Canadian Rubber Co. of Montreal.
Hodgman Rubber Co., New York.

DENTAL AND STAMP RUBBER.

Dental Gum.

American Hard Rubber Co., New York.
Cleveland Rubber Co., Cleveland, O.
Tyer Rubber Co., Andover, Mass.

Rubber Dam.

Cleveland Rubber Co., Cleveland, O.
Davidson Rubber Co., Boston.
Davol Rubber Co., Providence, R. I.
B. F. Goodrich Co., Akron, O.
Hodgman Rubber Co., New York.
Tyer Rubber Co., Andover, Mass.

Stamp Gum.

B. F. Goodrich Co., Akron, O.
Mattson Rubber Co., Lodi, N. J.
Mechanical Rubber Co., Chicago, Ill.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
New York Belting & Packing Co., N. Y.

ELECTRICAL.

Electrical Supplies.

American Hard Rubber Co., New York.
Joseph Stokes Rubber Co., Trenton, N. J.
Massachusetts Chemical Co., Boston.
Mattson Rubber Co., Lodi, N. J.
Tyer Rubber Co., Andover, Mass.

Friction Tape.

Acme Rubber Mfg. Co., Trenton, N. J.
Boston Belting Co., Boston.
Boston Woven Hose & Rubber Co.
Canadian Rubber Co. of Montreal.
Cleveland Rubber Co., Cleveland, O.
B. F. Goodrich Co., Akron, O.
Home Rubber Co., Trenton, N. J.
Massachusetts Chemical Co., Boston.
Mechanical Rubber Co., Chicago.
National India Rubber Co., Bristol, R. I.
Revere Rubber Co., Boston-New York.

Hard Rubber Goods.

American Hard Rubber Co., New York.
Canadian Rubber Co. of Montreal.
Luzerne Rubber Co., Trenton, N. J.
Joseph Stokes Rubber Co., Trenton, N. J.

RUBBER BUYERS' DIRECTORY—Continued.

Insulating Compounds.

Canadian Rubber Co. of Montreal.
Gutta Percha & Rubber Mfg. Co., Toronto.
Massachusetts Chemical Co., Boston.

Insulated Wire and Cables.

Acme Rubber Mfg. Co., Trenton, N. J.
W. R. Brixey, New York.
The Indiana Rubber and Insulated Wire Co., Jonesboro, Ind.
National India Rubber Co., Providence,

Insulated Wire Waxes.

American Wax Co., Boston.

Splicing Compounds.

Boston W. H. & R. Co., Boston.
Home Rubber Co., Trenton, N. J.
Massachusetts Chemical Co., Walpole, Mass.

SPORTING GOODS.

Foot Balls.

Canadian Rubber Co. of Montreal.
Cleveland Rubber Co., Cleveland, O.
Faultless Rubber Co., Akron, O.
B. F. Goodrich Co., Akron, O.
Hodgman Rubber Co., New York.
National India Rubber Co., Bristol, R. I.

Golf Balls.

Boston Belting Co., Boston.
Canadian Rubber Co. of Montreal.
Davidson Rubber Co., Boston.
B. F. Goodrich Co., Akron, O.
The Gutta Percha & Rubber Mfg. Co. of Toronto, Ltd.

Sporting Goods.

Canadian Rubber Co. of Montreal.
Faultless Rubber Co., Akron, O.
B. F. Goodrich Co., Akron, O.
Hodgman Rubber Co., New York.
Tyer Rubber Co., Andover, Mass.

Striking Bags.

Canadian Rubber Co. of Montreal.
Cleveland Rubber Co., Cleveland, O.
Faultless Rubber Co., Akron, O.
B. F. Goodrich Co., Akron, O.
Rubber Products Co., Barberton, O.

Submarine Outfits.

Hodgman Rubber Co., New York.
A. Schrader's Sons, Inc., New York.

MISCELLANEOUS.

Boxes (Wood).

Henry H. Sheip & Co., Philadelphia.

Brass Fittings.

A. Schrader's Son, New York.

Cement (Rubber).

Boston Belting Co., Boston.
Canadian Rubber Co. of Montreal.
B. F. Goodrich Co., Akron, O.
Manhattan Rubber Mfg. Co., New York.
Massachusetts Chemical Co., Walpole, Mass.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
New York Belting & Packing Co., N. Y.

Chemists.

Chute, H. O., New York.
Maywald, F. J., New York.
Stephen P. Sharples, Boston, Mass.

Consulting Engineers.

Akron Rubber Engineering Co., Akron, O.

Rubber Journals.

Gummi-Zeitung, Dresden, Germany.
L'Agriculture des Pays Chauds, France.

Rubber Tree Seeds.

J. P. William & Bros., Heneratgoda, Ceylon.

Tapping Tools.

G. Van den Kerckhove, Brussels, Belgium.

Valves for Air Goods.

A. Schrader's Son, Inc., New York.

MACHINERY AND SUPPLIES FOR RUBBER MILLS.

RUBBER MACHINERY.

Acid Tanks.

Birmingham Iron Foundry, Derby, Conn.

Band Cutting Machines.

A. Adamson, Akron, O.
Birmingham Iron Foundry, Derby, Conn.

Belt Folding Machines.

Birmingham Iron Foundry, Derby, Conn.
Farrel Foundry & Mach. Co., Ansonia, Conn.

Belt Slitters.

Cloth Dryers.

Gearing.

Shafting.

Wrapping Machines.

Birmingham Iron Foundry, Derby, Conn.
Farrel Foundry & Mach. Co., Ansonia, Conn.

Belt Stretchers.

Birmingham Iron Foundry, Derby, Conn.
Farrel Foundry & Mach. Co., Ansonia, Conn.
Hoggson & Pettis Mfg. Co., New Haven.

Boilers.

William R. Thropp, Trenton, N. J.
John E. Thropp & Sons Co., Trenton, N. J.

Braiders.

New England Butt Co., Providence, R. I.

Calenders.

Birmingham Iron Foundry, Derby, Conn.
David Bridge & Co., Castleton, Manchester, Eng.
Farrel Foundry & Mach. Co., Ansonia, Conn.
Textile-Finishing Machinery Co., Providence, R. I.

Castings.

A. Adamson, Akron, O.
Birmingham Iron Foundry, Derby, Conn.
Farrel Foundry & Mach. Co., Ansonia, Conn.

Chucks (Lathe).

Hoggson & Pettis Mfg. Co., New Haven.

Churns.

American Tool & Machine Co., Boston.

Clutches.

Farrel Foundry & Mach. Co., Ansonia, Conn.

Crackers.

Birmingham Iron Foundry, Derby, Conn.

Devulcanizers.

Biggs Boiler Works Co., Akron, O.
Birmingham Iron Foundry, Derby, Conn.
Edred W. Clark, Hartford, Conn.
John E. Thropp & Sons Co., Trenton, N. J.
William R. Thropp, Trenton, N. J.

Dies.

Hoggson & Pettis Mfg. Co., New Haven.

Doubling Machines.

American Tool & Machine Co., Boston.

Drying Machines.

Buffalo Foundry & Machine Co., Buffalo, N. Y.
David Bridge & Co., Castleton, Manchester, Eng.
Joseph P. Devine, Buffalo, N. Y.
Birmingham Iron Foundry, Derby, Conn.
Textile-Finishing Machinery Co., Providence, R. I.

Embossing Calenders.

Textile-Finishing Machinery Co., Providence, R. I.

Engine Steam.

William R. Thropp, Trenton, N. J.
John E. Thropp & Sons Co., Trenton, N. J.

Engraving Rolls.

Hoggson & Pettis Mfg. Co., New Haven.

Grinders and Mixers.

Birmingham Iron Foundry, Derby, Conn.
Farrel Foundry & Mach. Co., Ansonia, Conn.
John E. Thropp & Sons Co., Trenton, N. J.
William R. Thropp, Trenton, N. J.

Hangers.

Farrel Foundry & Mach. Co., Ansonia, Conn.

Hose Machines.

A. Adamson, Akron, O.
Birmingham Iron Foundry, Derby, Conn.
New England Butt Co., Providence, R. I.

Hydraulic Accumulators.

Birmingham Iron Foundry, Derby, Conn.
Farrel Foundry & Mach. Co., Ansonia, Conn.
John E. Thropp & Sons Co., Trenton, N. J.

Insulating Machinery.

John Royle & Sons, Paterson, N. J.

Lathes—Hard Rubber.

A. Adamson, Akron, O.

Lathes—Jar Ring.

A. Adamson, Akron, O.
Birmingham Iron Foundry, Derby, Conn.
John E. Thropp & Sons Co., Trenton, N. J.
William R. Thropp, Trenton, N. J.

Machinists' Tools.

Hoggson & Pettis Mfg. Co., New Haven.

Moulds.

A. Adamson, Akron, O.
Birmingham Iron Foundry, Derby, Conn.
Continental Rubber Works, Erie, Pa.
Hoggson & Pettis Mfg. Co., New Haven.
John E. Thropp & Sons Co., Trenton, N. J.
Williams Foundry & Machine Co., Akron, O.

Pillow Blocks.

Farrel Foundry & Mach. Co., Ansonia, Conn.

Presses (for Rubber Work).

A. Adamson, Akron, O.
Birmingham Iron Foundry, Derby, Conn.
Boomer & Boschert Press Co., Syracuse, N. Y.
Edred W. Clark, Hartford, Conn.
Farrel Foundry & Mach. Co., Ansonia, Conn.
John E. Thropp & Sons Co., Trenton, N. J.
William R. Thropp, Trenton, N. J.
Williams Foundry & Machine Co., Akron, O.

Pumps.

Birmingham Iron Foundry, Derby, Conn.
Boomer & Boschert Press Co., Syracuse.
Farrel Foundry & Mach. Co., Ansonia, Conn.

Racks for Boot and Shoe Cars.

Hoggson & Pettis Mfg. Co., New Haven.

Reducing Valves.

Mason Regulator Co., Boston.

Rollers (Hand).

Hoggson & Pettis Mfg. Co., New Haven.

Rubber Covering Machines.

New England Butt Co., Providence, R. I.

Separators.

Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

Spreaders.

American Tool & Machine Co., Boston.
Birmingham Iron Foundry, Derby, Conn.
New England Butt Co., Providence, R. I.

Steam Traps and Specialties.

Jenkins Bros., New York.
Mason Regulator Co., Boston.

Steel Stamps.

Hoggson & Pettis Mfg. Co., New Haven.

Stichers (Hands).

Hoggson & Pettis Mfg. Co., New Haven.

Strip Covering Machines.

Strip Cutters.

New England Butt Co., Providence, R. I.

Tire Molds.

John E. Thropp & Sons Co., Trenton, N. J.
Williams Foundry & Machine Co., Akron, O.

Tubing Machines.

A. Adamson, Akron, O.
Edred W. Clark, Hartford, Conn.
John Royle & Sons, Paterson, N. J.
Williams Foundry & Machine Co., Akron, O.

Vacuum Drying Chambers.

Buffalo Foundry & Machine Co., Buffalo, N. Y.
Joseph P. Devine Co., Buffalo, N. Y.

Varnishing Machines.

Birmingham Iron Foundry, Derby, Conn.

Vulcanizers.

Biggs Boiler Works Co., Akron, O.
Birmingham Iron Foundry, Derby, Conn.
Farrel Foundry & Mach. Co., Ansonia, Conn.
John E. Thropp's Sons Co., Trenton, N. J.
William R. Thropp, Trenton, N. J.

Washers.

Birmingham Iron Foundry, Derby, Conn.
David Bridge & Co., Castleton, Manchester, Eng.
Farrel Foundry & Machine Co., Ansonia, Conn.
John E. Thropp & Sons Co., Trenton, N. J.
William R. Thropp, Trenton, N. J.
Turner, Vaughn & Taylor Co., Cuyahoga Falls, O.

Wire Insulating Machines.

New England Butt Co., Providence, R. I.
John Royle & Sons, Paterson, N. J.

SECOND-HAND MACHINERY.

W. C. Coleman Co., Boston.
Philip McGrory, Trenton, N. J.
M. Norton & Co., Charlestown, Mass.

FACTORY SUPPLIES.

Aluminum Flake.

Aluminum Flake Co., Akron, O.

Antimony, Sulphurets of.

Golden.

Actien-Ges. Georg Egestorff's Salzwerks Linden, Germany.
Atlas Chemical Co., Newtonville, Mass.

Golden and Crimson.

Joseph Cantor, New York.

Golden and Crimson.

Wm. H. Scheel, New York.

MACHINERY AND SUPPLIES FOR RUBBER MILLS—Continued.

Antimony, Sulphurets of.—Continued.

Artificial Rubber.
National Co., Chicago.
Stamford (Conn.) Rubber Supply Co.
Typke & King, London, England.

Balata.
George A. Alden & Co., Boston.

Barytes.
Gabriel & Schall, New York.

Benzol.
Barrett Mfg. Co., Philadelphia.
Samuel Cabot, Boston.

Black Hypo.
Joseph Cantor, New York.
William H. Scheel, New York.
Typke & King, London, England.

Carbon Bisulphide.
George W. Spealght, New York.

Chemicals.
George W. Spealght, New York.
S. P. Wetherill Co., Philadelphia, Pa.

Colors.
Joseph Cantor, New York.
William H. Scheel, New York.
Typke & King, London, England.
S. P. Wetherill Co., Philadelphia, Pa.

Crude Rubber.
George A. Alden & Co., Boston.
W. C. Coleman Co., Boston.
Wallace L. Gough Co., New York.
Hagermeyer & Brunn, New York.
Adolph Hirsch & Co., New York.
Rubber Trading Co., New York-Boston.

Dermatine.
The Dermatine Co., London.

Ducks and Drills (Cotton).
J. H. Lane & Co., New York.

Fossil Flour.
Oxford-Tripoli Co., Ltd., N. Y.

Gilsonite.
William H. Scheel, New York.

Graphite Grease.
Jos. Dixon Crucible Co., Jersey City.

Guayule Rubber.
Continental Rubber Co.
Ed. Maurer, New York.

Gutta-Percha.
George A. Alden & Co., Boston.
W. C. Coleman Co., Boston.
Rubber Trading Co., New York-Boston.

Hydro-Carbon Products.
Geo. A. Alden & Co., Boston.
American Wax Co., Boston.
William H. Scheel, New York.
Raven Mining Co., Chicago.

Infusorial Earth.
Oxford-Tripoli Co., Ltd., N. Y.
Stamford (Conn.) Rubber Supply Co.

Kapak.
Raven Mining Co., Chicago.

Lampblack.
Samuel Cabot, Boston.

Lead—Blue.

Lead—Sublimed White.
Picher Lead Co., Chicago, Ill.
St. Louis Smelting & Refining Co., St Louis.

Lithopone.
Gabriel & Schall, New York.

Mineral Rubber.
Geo. A. Alden & Co., Boston.
American Wax Co., Boston.

Paris White and Whiting.
Queensgate Whiting Co., Ltd.
H. F. Taintor Mfg. Co., New York.

Reclaimed Rubber.
Alkali Rubber Co., Akron, O.
F. H. Appleton & Son, Boston.
Bloomingdale (N. J.) Soft Rubber Co.
E. H. Clapp Rubber Co., Boston, Mass.
W. C. Coleman Co., Boston.
Continental Rubber Works, Erie, Pa.
Dauversport Rubber Co. Boston.
Eastern Rubber Co., New York.
New Jersey Rubber Co., Lambertville, N. J.
Pequanoc Rubber Co., Butler, N. J.
Philadelphia Rubber Works, Philadelphia.
Rickaby Rubber Mfg. Co., South Framingham, Mass.
Stockton Rubber Co., Stockton, N. J.
Jos. Stokes Rubber Co., Trenton, N. J.
S. & L. Rubber Co., Chester, Pa.
U. S. Rubber Co., Chester, Pa.
U. S. Rubber Reclaiming Works, N. Y.
Westmoreland Rubber Mfg. Co., Grapeville, Pa.

Agents and Dealers.
Philip McGrory, Trenton, N. J.
H. P. Moorhouse, Paris, France.
Rubber Trading Co., New York-Boston.
Wm. Somerville's Sons, Liverpool.

Rubber Flux.
Massachusetts Chemical Co., Walpole, Mass.

Rubber Makers, White.
Grasselli Chemical Co., N. Y.

Scrap Rubber.
Bers & Co., Philadelphia.
S. Birkenstein & Sons, Chicago.
W. C. Coleman Co., Boston.
Wm. H. Cummings & Sons, New York.
Theodore Hofeller & Co., Buffalo, N. Y.
M. Kaufman, Chicago.
B. Loewenthal & Co., New York and Chicago.
Philip McGrory, Trenton, N. J.
Meyer Bros., Philadelphia, Pa.
M. Norton & Co., Charlestown, Mass.
J. Schnurmann, London.
Schwab & Co., Philadelphia.
Trenton Scrap Rubber Supply Co., Trenton, N. J.
United States Waste Rubber Co., Brockton, Mass.
M. J. Wolpert, Odessa, Russia.

Substitute.
T. C. Ashley & Co., Boston.
Joseph Cantor, New York.
Carter, Bell Mfg. Co., New York.
Corn Products Refining Co., New York.
Massachusetts Chemical Co., Boston.
The Rubber Chemical Co., Birmingham, England.
Wm. H. Scheel, New York.
Stamford (Conn.) Rubber Supply Co.
Typke & King, London, England.
Wing & Co., C. S., Wollaston, Mass.

Sulphur.
Battelle & Renwick, New York.
T. & S. C. White Co., New York.

Sulphur Chloride.
William H. Scheel, New York.
George W. Spealght, New York.
Stamford (Conn.) Rubber Supply Co.

Tripoli.
Oxford-Tripoli Co., Ltd., N. Y.

Waxes.
American Wax Co., Boston.

Whiting.
H. F. Taintor Mfg. Co., New York.

Zinc, Oxide of.
New Jersey Zinc Co., New York.

Zinc Substitute.
Aluminum Flake Co., Akron, O.

Zinc Sulphide.
Joseph Cantor, New York.
Typke & King, London, England.

BUYERS' DIRECTORY FOR RUBBER TIRES AND ACCESSORIES.

Auto Top Fabrics.
Hodgman Rubber Co., New York.
National India Rubber Co., Bristol, R. I.

Fabrics.
Hewins, E. D., Boston.
Lane & Co., J. H., New York.
National India Rubber Co., Bristol, R. I.

Insulated Wires.
The Indiana Rubber and Insulated Wire Co., Jonesboro, Indiana.
National India Rubber Co., Bristol, R. I.

Mats, Automobile.
Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co., Cambridge, Mass.
The Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd.
Manhattan Rubber Mfg. Co., New York.
Massachusetts Chemical Co., Walpole, Mass.
National India Rubber Co., Bristol, R. I.
Revere Rubber Co., Boston, Mass.

Repair Stock.
Manhattan Rubber Mfg. Co., Passaic, N. J.
Mattson Rubber Co., Lodi, N. J.
Thermoid Rubber Co., Trenton, N. J.

Rims, Wheel.
Goodrich Co., B. F., Akron, Ohio.

Tires.
Bailey & Co., C. J., Boston, Mass.
Canadian Rubber Co., of Montreal, Ltd.
Continental Caoutchouc Co., New York.
Continental Rubber Works, Erie, Pa.
Dunlop Tire & Rubber Goods Co., Toronto.
Empire Rubber Mfg. Co., Trenton, N. J.
Goodrich Co., B. F., Akron, Ohio.
Gutta Percha & Rubber Mfg. Co., Toronto.
The Indiana Rubber and Insulated Wire Co., Jonesboro, Indiana.
Kokomo Rubber Co., Kokomo, Ind.
Mattson Rubber Co., Lodi, N. J.
Morgan & Wright, Detroit, Mich.
Pirelli & Co., Milan, Italy.
Springfield Tire & Rubber Co., Springfield, O.
Plymouth Rubber Co., Stoughton, Mass.
Republic Rubber Co., Youngstown, Ohio.
Trenton Rubber Mfg. Co., Trenton, N. J.

Automobile and Carriage.
Acme Rubber Mfg. Co., Trenton, N. J.
Boston Belting Co., Boston-New York.
Revere Rubber Co., Boston-New York.

Tire Fabrics.
Lane & Co., J. H., New York.

Tire Repairing.
Voorhees Rubber Mfg. Co., Jersey City, N. J.

Treads.
Boston Belting Co., Boston-New York.
Boston Woven Hose & Rubber Co., Cambridge, Mass.
Manhattan Rubber Mfg. Co., New York.
Revere Rubber Co., Boston, Mass.

Valves, Tire.
Schrader's Sons, Inc., A., New York.